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EDITORIAL

Ourselves

WE owe our readers and advertisers a word of explanation for the new format of the *Journal.* The enforcement by the Government of India, of the Paper Control (Economy) Order, 1944, has meant such a drastic cut in our normal paper consumption that it would have been impossible for us to accommodate all our advertisers or even a good number of them if we had retained the old format of the *Journal.* Faced with the alternatives of either temporarily reducing the format of the *Journal* and continuing to give all our advertisers the same service as before, on the one hand, and retaining the old format of the *Journal* and depriving many of our advertisers of their only effective medium of publicity, on the other, we have made the obvious choice. Trade and Technical Journals in England and elsewhere have also done much the same thing and are none the worse for it. On the other hand, the new format of the *Journal* should make it easier to handle than before without at the same time losing much of its potentialities for display and advertisement purposes. The editorial pages, too, should not by any means be affected by this change in format. A clause in the Paper Control (Economy) Order ensures that the reader gets more reading matter than ever before, while we should find it possible not only to maintain but also to increase the reader interest by publishing articles and news of a more varied nature.

Future of Control

THE way in which the Department of Industries and Civil Supplies, Government of India, has fought inflation in India through its control of industry provides instructive reading. At the outset the new Department had to organize increased supplies of civilian goods, including textiles, for civilian consumption through increased local production and, where necessary, imports, and through releasing stocks surplus to the needs of the Supply Department. It had to break the racket of the hoarder and the profiteer, counter black market activities and make available to consumers as much goods as possible at reasonable prices. For achieving these results it had, of course, to control production, distribution and prices, in which task it has had the valuable co-operation of advisory bodies representing the interests concerned, e.g., the Textile Control Board. To-day the supply and price positions of cotton textiles are far better than they were in the beginning of 1943. From a pre-war average production of 3,600 million yards it has been stepped up to 4,800 million yards and it was expected that handlooms would account for another 2,000 million yards. Out of the total, however, exports and Defence services require 1,200 million yards, leaving a balance of 5,600 million yards as against 6,400 million yards before the war. So far as the ceilings are concerned, we have reason to believe that they have been scrupulously observed by the mills in general. The industry has had to sacrifice the profits arising from inflated times, to carry out Defence orders, to supply the needs of the country as well as of export markets, all at the cost of over-worked machinery.

It is well to bear in mind, however, that equal success has not been evident in the matter of distribution which, in spite of all that the control authorities are doing, continues to be a baffling problem. While it may be readily conceded that the various bottlenecks in distribution and resultant scarcity are to a great extent due to the reprehensible activities of a few, it cannot be denied that transport difficulties, too, have had their fair share in impeding the progress of distribution. Inherent defects in the quota system itself have come to the surface and, while the different centres may have been obtaining more or less the volume of goods allotted to them, several have not been able to obtain the special types of goods in demand in their particular territories. Further, the quota-holders themselves are suspected of forming rings to withhold stocks and of adopting other questionable practices. We hope, however, that the authorities who have brought control to its present stage of development will continue to bend all their efforts towards bringing under the law any section of the community, however numerous or influential, which threatens to thwart it.

What, however, is the future of control? " It is fairly clear," said the Textile Commissioner the other day, "that even if the war were to end in the near future the demand for cloth throughout the world will be so great that in the interests of the people of the country, if for nothing else, control in some shape or form over the manufacture and distribution of cloth will be necessary for a long period after the war." The present control measures may, therefore, continue until the chances of hoarding, profiteering and other unsocial activities are reduced to *nil.* Even in the long run control would seem to have a special role to play in the world. Already the relative merits of State control and private enterprise are being hotly debated and, as public opinion in America shows, if the current trends are against complete State control, they are no less so against unrestricted private enterprise. The advocates of State control and private enterprise both have equally plausible arguments to support their respective cases, but the choice would seem to lie between the two extremes, for there can be really no conflict between the State and private enterprise. As Sir Stafford Cripps pointed out recently, " it is not a true appreciation of the situation to imagine that we must either nationalize all our industries or leave them all under uncontrolled private enterprise." Effective control should always help to make the most of our man-power and material resources. The aim of such control should be to " serve private enterprise, not to strangle it ; to direct initiative, not to discourage it ; to control the nation's resources, not to corner them ; to protect the consumer, not to penalize the producer ; to safeguard the public by the control of investments, not to prohibit the pioneer spirit ; to control and co-ordinate research ; to give proper weight to capital, labour and consumer interests ; to secure the greatest good of the greatest number, not to stamp out the few who make that good available to the many."

University Degree in Textile Manufactures

IN commenting last month on the 15-year plan of the Government of Bombay we referred but casually to the proposal to institute a degree course in textile manufactures at the Victoria Jubilee Technical Institute as a post-war measure. It is a happy circumstance that in this issue, which marks the commencement of the fifty-fifth year of the *Journal*, we should be able to dwell on the subject at more length. The need for higher technological education, with special reference to the textile industry, has always been strongly urged in the pages of this *Journal* and it is therefore matter for gratification that a definite announcement has at long last been made. The subject, on the other hand, has been exercising the minds of the authorities for quite some time now. When the V. J. T. Institute celebrated its Golden Jubilee in 1938, the trustees expressed the hope of introducing a new course " which will prepare students for the degree standard and to develop the Institute on the lines of the Manchester College of Technology without, however, any duplication of the work that is being carried on at the Bombay University's Department of Chemical Technology, or without interfering in any way with the existing diploma courses at the Institute itself. " The Department of Chemical Technology has all but fulfilled the expectations raised at its inauguration of its becoming in due course a full-fledged college of technology. Writing at the time of the Golden Jubilee of the V. J. T. Institute we strongly supported Sir Ness Wadia's suggestion that a well-constituted institution should be formed in which the V. J. T. Institute, the Technological Laboratory of the I.C.C.C. and the Department of

Chemical Technology should co-operate, and that the last mentioned institution should make a beginning by constructing its own building in Matunga ; this has since been done and the Department is now housed in its own premises. At the same time strenuous efforts were being made at the V. J. T. Institute to introduce improved equipment and staff, and to raise the level of the instruction imparted to the degree standard, in order to enable students to take up administrative and executive posts in mills without their having to go abroad for higher study and training. It was only in July last that we published an authoritative outline of a course of studies for the education of the technical executives in textile mills.* It was there stated that the authorities of the V. J. T. Institute had prepared a course in textile manufactures leading to the University degree and that it was expected that the Institute would be able to put the scheme into effect in a short time. It is understood that the Government of Bombay have tentatively agreed to make a non-recurring grant for the purchase of the necessary equipment and a recurring grant for the provision of additional staff. If the shifting of the Department of Chemical Technology into its own building in Matunga was the first step in the integration and co-ordination of the available educational and research facilities, the institution of a degree course in the V. J. T. Institute may well be considered the second step.

Obviously, therefore, the institution of degree courses in textile manufactures has been long overdue. The textile industry is by far the largest industry in this country and it has been an anomaly in the development of technical education in India that so far no provision was made for imparting the highest type of education in this branch of technology. The decision of the Government of Bombay is, therefore, very opportune, since the textile industry will in the future face new technical problems arising out of the various demands that will be made on it during the post-war period. In this connection the remarks made by Sir Victor Sassoon while opening the first All-India Textile Conference come back to our mind. He said : " Bombay, particularly, must in the post-war years depend more than ever on maintaining an export market. But this cannot be done if care is not taken to see that first-class goods leave this country made under first-class conditions and made at prices competitive with those anywhere in the world."

We understand that the authorities of the V. J. T. Institute have already gone into the question of the duration of the courses of study and the curriculum for the proposed degree, and these will no doubt be further scrutinized by the appropriate university authorities. We have therefore no desire to go into the question at this stage beyond making a few general observations. The degree courses aim at imparting education and giving training which will qualify the students to occupy executive posts in the industry. Apart from the technical knowledge with which he will necessarily be equipped for performing successfully the duties relating to process work and maintenance of plant at its highest efficiency, an executive must possess other essential qualities such as initiative, resourcefulness, vigour and power of leadership. It has been the experience of educationists abroad that such qualities can be developed and fostered by suitable training and the potential manager can be given an opportunity to develop his powers during the formative period of his life. We feel that the experience gained in this direction by educational institutions abroad could be utilized with great advantage while framing the courses for the proposed degree. It has been often stated that our educational system is examination-ridden and yet no effort has so far been made to minimize the importance of examinations. We feel, therefore, that whenever new degrees are instituted an effort should be made in this direction and, as the V. J. T. Institute will be, at any rate for some time to come, the only place where courses for this degree will be offered, this opportunity could be well utilized for making the technical students at the university realize the importance of systematic and regular work throughout the course of training rather than a concentrated " swot " at

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*See the *Indian Textile Journal*, July 1944, p. 401 ; " Technical Education in Relation to the Textile Industry," by Mr. P. N. Joshi, Principal, V. J. T. Institute, Bombay.

the approach of the examination. In all technical courses there should be greater emphasis on education and training in both the class-rooms and the laboratories and workshops, and the assessment of the students' ability should be determined by the work he has done during the year rather than by his ability to show a creditable performance in examinations by "swotting" lecture notes and the facts and formulæ available in text books.

The scheme for the institution of degree courses, when completed, will make available to the textile department of the Institute a complete, modern, full-size spinning plant comprising several latest types of carding, drawing and spinning machines for coarse, medium and fine counts. The spinning plant will include various systems of high draft on speed frames and spinning frames, complete plant for combing, variable speed spinning system, etc. A modern cotton waste plant is also included in the scheme. A complete weaving equipment comprising different modern systems of yarn winding, warping, sizing and doubling, and looms of the latest type of weaving, plain dobby and most complex jacquard fabrics, will be provided for imparting instruction of a very high standard. The processes on the machine will be carried out under controlled conditions of atmospheric temperature and humidity. Facilities for training in dyeing, bleaching and finishing, in textile physics and general engineering have also been provided for, while the qualifications and experience of the present head of the Department should prove helpful for its enlarged functions under a degree course.

Government have thus shown their very keen interest in the requirements of the needs of the textile industry in the post-war period and we feel that it is now for the industry to come forward with liberal donations for providing further facilities in the Institute for post-graduate work and fundamental and industrial research in the technical problems of the textile industries. The V. J. T. Institute has already rendered unique service to the development of industry in India and holds the premier position among technical institutions owing to the practical sagacity and untiring efforts of a succession of trustees who were able to win the confidence and, therefore, the benevolence of a large number of public-spirited citizens as well as the sympathetic co-operation and support of Government.

The Millowners' Association, Bombay, recently demonstrated their keen interest in technological education by their liberal donation to the University of Bombay. That donation will be utilized for research in the dyeing, bleaching and finishing of fabrics. Research in fibre properties, in factors affecting yarn and thread structures, and in the design and performance of textile machinery, will have to be fostered and encouraged to keep our textile industry at a high level of efficiency, and there can be no better institution for the purpose in view than the V. J. T. Institute. When the Institute was transferred from Byculla to Matunga the Millowners' Association subscribed Rs. 1,04,500, collected from members, to enable it to move into the new premises. Besides, the Association gave during the first 50 years of the Institute's existence, a munificent donation of Rs. 1,10,000 by annual subscriptions. We hope, therefore, that the millowners and other industrialists will once again come forward, jointly and severally, with handsome contributions to the Institute's funds and identify themselves with the cause of higher technological education and research that is so vital to the prosperity of the textile industry in India.

This issue marks the commencement of the 55th year of publication of the INDIAN TEXTILE JOURNAL.

Owing to paper shortage and the limitations imposed by the Paper Control (Economy) Order, 1944, the *Journal* will appear in its present reduced size and format until further notice.

Evolution of Social Insurance in India

Some Practical Suggestions

By A. N. AGARWALA, *Lecturer, University of Allahabad*

(*Specially Contributed*)

THAT the Government of India in the Labour Department have firmly resolved at long last to come to grips with the longstanding problem of the introduction of social insurance in this country is a matter of great satisfaction. It would be recalled that the Second (1943) Plenary Conference adopted a resolution that the Government of India should appoint a committee to prepare a scheme for the establishment of social security in India by providing for insurance against old age, unemployment, etc.; and the Fourth Conference of Labour Ministers blessed this resolution and themselves resolved that "with a view to provide adequate materials on which to plan a policy of social security for labour, the Central Government . . . should immediately set up machinery to investigate questions of wages and earnings, employment and housing and social conditions generally, and that as soon as possible after receipt of the required statistics and other data, the Central Government should appoint a mixed committee to formulate plans of social security." In pursuance of this resolution the Government of India appointed on 12th February 1944, the Labour Investigation Committee under the chairmanship of Mr. D. V. Rege, I.C.S., and consisting of Messrs. S. R. Deshpande, B. P. Adarkar and Ahmad Mukhtar as members. This committee is now busy in its exacting deliberations.

This is, no doubt, an excellent beginning; and if the work of the Labour Department in the recent past is any criterion, we should soon expect substantial results. The present, as such, is an opportune moment when some hard thinking is called for on the vital issue of the form that the evolution of social insurance should assume in our country. Here, the time factor and stagification in evolution are of the essence.

Practice in the United Kingdom

There can be no two opinions on the point that it would be irrational and wasteful for us to adopt the process of evolution followed by other countries or to start without an established plan in this regard. In the United Kingdom and other countries, the different branches of social insurance came into existence in a most haphazard manner and without any deliberate system or co-ordination and they can best be regarded as historical accidents. As need was felt or circumstances became favourable for one branch or the other, it was adopted as an individual whole, without keeping an eye on the older branches and their nature and intimacy or giving thought to the branches which might have to be brought into being later. Such an individualistic, uncoordinated and unsystematic growth is bound to possess many drawbacks which are fully rampant in Western countries. A close study of the Beveridge Report, for instance, reveals that the British system of social insurance at present possesses many fundamental deficiencies and drawbacks despite the fact that it is better than any other like system in the world; and Sir William proposes to remove these shortcomings by bringing about proper unification and co-ordination in its various limbs. A major defect of the British and other systems is the existence of a variety of administrative organs which operate quite separately and independently in their own peculiar ways, with the result that, besides other disadvantages, the cost in terms of money and trouble is much more than what it would be otherwise. Then, again, it is paradoxical that for risks and events which are in no way materially different from each other, there are different contribution conditions and benefits, which is directly ascribable to absence of unification. The income needs of a man who falls sick are in no way different from his income needs when he is thrown out of employment; but in the two cases in Britain, he would get different benefits, which does not make sense. It is a truism to state that piecemeal solution often leads to frittering away of financial resources and duplication in a variety of ways, which should be rigidly avoided in every sane and logical system. An ununified system is, again, the battleground of much avoidable litigation and bickerings in which one branch tries to shift the claim on to another branch, and the whole affair calls for constant vigil on the part of the inspectorate and the executive, and bulky and numerous case-laws and frequent amendments. Such a system is sure to make the beneficiaries subject to great difficulties, if not actually hardships. In order to keep our social insurance system free from these and other like shortcomings, it is necessary that it should be made unified and co-ordinated right from the start. It would be irrational and wasteful to ape the foreign pattern of growth to the extent of borrowing even their defects, drawbacks and shortcomings; and on the grounds of lack of finances, unsuitability of time and unpreparedness for social insurance, to create patches rather than parts of a systematic whole. What was historical necessity abroad must not be followed by choice in this country. On the other hand, we must make every effort to learn from and profit by their experience. Expert opinion has come to veer round to the truth that a system of social insurance brought into being by a process of haphazard growth has nothing to commend itself, and authorities like Sir William Beveridge, Joseph L. Cohen and others are one in advocating a unified system of social insurance which should as well be our ideal and aim. A properly unified system alone can bring in that rationality and sanity, and a square deal between the insured *inter se* and between one risk and another, without which a system of social insurance must ever remain an anomaly and conundrum.

Conditions in India

We must not be understood to suggest that we will have to implement, in case we must adopt the principle of unification, a full-blooded and full-fledged social insurance scheme in this country all at once, in all its forms and manifestations. This we simply cannot do. We cannot build Rome in a day. Our resources will not be equal to the task. Our Governments, which have been consistently starving all the nation-building activities so chronically, would not be able to subsidize the entire scheme to-day. Our workers, groaning under the crushing burden of unpaid and outstanding items of expenditure, might not be in a position to contribute in respect of provision against all the disabilities like sickness, unemployment, accident, old age, etc. Our employers may similarly be unable to contribute adequately, within the limits imposed upon their paying capacity by competition from foreign sources as a result of the pregnability of the constitution, in respect of all these schemes of social insurance under the existing circumstances or those expected in the wake of peace. If social insurance is nothing more than a redistribution of a fraction of our income in a particular manner, it is logical to understand that unless the aggregate income, of which the fraction is to be thus redistributed, is so large as to allow adequate provision of the sort which is intended and desired in the shape of social insurance, it would be fruitless to set up the latter, for it simply cannot be afforded. The tripartite contributory system cannot be expected to work if it is channelled and canalized to the confluence of all the branches rather than to each tributary separately and at different period points. We must candidly realize that we cannot adopt the whole of the social insurance system in one attempt under the existing circumstances.

We of course presume, while making the above statement, that the social insurance system might have to work without the framework of a planned economy. At present we do not have an economic plan working in this country; but in case one is adopted and worked up in the near future, it would certainly be so framed as to make generous provision for the introduction of a complete system of social insurance which might act as a bulwark to the standard of living of the people that would not be allowed to drop below a certain minimum level. Increase in national dividend and *per capita* income would then make such a plan not only possible but also feasible. But as we are not very sanguine about its advent in the near future, it would be extravagant to begin building castles in the air and aspire for a complete social insurance system in the near future. There is at least something in the employers' opposition to a sudden introduction of the entire system, which deserves serious thought. If the employers are made to pay in respect of all the branches of social insurances without at the same time adopting an economic plan, their cost of production would undoubtedly rise, and that in a world where economic penetration is taking an aggressive turn and foreign countries are adopting all means, fair and unfair, of lowering their prices in Indian markets with a view to underselling Indians—a process which seems to have already started. It is, no doubt, true that social insurance would benefit the employers as well, and they would reap all the advantages that flow out of stability of employment and labour supply, increasing efficiency of workers, reduction in the intensity and frequency of industrial unrest and so forth; but we must not brush aside the fact that such a correspondence between cost and benefits to the employers cannot be unchallengeably established on theoretical or practical grounds. Apart from it, there is sure to be a time-lag between cost and benefits; and as in this time-lag the problem of competition would be keen, there is good reason for the adoption of a smooth process of stage-by-stage evolution.

Social Insurance Step by Step

Our advocacy of a unified system of social insurance and the opposition to the introduction of the entire system by one stroke of the pen are not, however, of the same category to which the worn-out argument that "the present is not the opportune time for the introduction of social insurance in this country," belongs. For we definitely maintain that all the contributories to the tripartite insurance fund in India can at present certainly contribute, if not in respect of all the risks, at least in respect of one or two risks. That is within the paying capacity of all the three parties, as is partly clear from their recent attitude in this regard. More specifically, we would suggest the introduction in our country of social insurance branch by branch according to a predetermined schedule and pattern; so that while we may implement only one branch at a time, and one after another in agreement with our resources and requirements, every new branch which is called to life might not follow its own path and contribute to a haphazard and assymetrical growth, but might occupy its own place in the harmonious and rhythmical pattern drawn up in advance and to be realized at the end. From this angle, it would be necessary for us, first of all, to draw up a comprehensive and all-embracing plan of social insurance. Better still, if it is a plan of social security and includes not only social insurance but also social assistance. The next step should be the introduction of one branch of social insurance only, to begin with, for which purpose health insurance is pre-eminently fitted. Health insurance was the first system to make its appearance in foreign countries and is the simplest and most workable on account of the comparative fixity and predictability of the risk involved and the ease of administration and dispensing of the benefits. Indeed, the actuarial system, causing such serious complexities ordinarily, can be entirely got over by the adoption of the assessment of budgetary technique in the case of health insurance. To health insurance can later be added up slowly and gradually the other types of social insurance schemes.

This, in our view, would be the ideal evolution-pattern for us to adopt and follow in this regard. Though we do not know how the Government mind is working in this direction, it appears that they are already approaching the problem from this angle; and if so, all credit to them. They first appointed Mr. B. P. Adarkar to draw up a scheme of sickness insurance and, for all we know, this might have already been submitted to the Government and might be receiving their attention. And now they have appointed the aforesaid Labour Investigation Committee (i) to collect data relating, *inter alia*, to wages and earnings, employment, housing and social conditions of labour, and in particular of industrial labour in India, and (ii) to investigate and report, *inter alia*, on the risks to which labour is exposed and the most suitable methods of meeting these risks. We are glad to note that the officer who prepared the Sickness

Insurance Scheme is a member of the Labour Investigation Committee as well, which would ensure that the Sickness Insurance Scheme would be dovetailed in the wider scheme now on the anvil. What we do not, however, fully understand is the reason of the Government's decision to give the task of framing the actual scheme of social insurance to another committee to be subsequently appointed. Surely the Committee which is entrusted with investigation can as well draw up a suitable scheme of social insurance. It would be economical, in points of time, money and energy, to adopt this direct method rather than follow the indirect and long-drawn one. Should this be the result of a fear that the preparation of the whole scheme would mean its immediate implementation and consequently this method has been adopted to while away time, we submit that the fear is altogether baseless and the indirect method now adopted entirely unnecessary. The Government should make their policy in this regard clear and declare that the entire social insurance scheme cannot be all at once introduced in this country, which we hope would go a long way in clearing the atmosphere.

We would, therefore, suggest to the Government of India that they must (i) declare their intention of introducing a comprehensive and unified system of social insurance in this country in due course of time; (ii) commit themselves to the principle of hastening slowly and of following a process of stagified evolution of social insurance; (iii) give to the Labour Investigation Committee the actual task of framing the Social Insurance Scheme for India as well; and (iv) introduce Sickness Insurance Scheme as soon as possible. This four-pointed programme would allay all suspicions, remove false fears, satisfy workers and employers, strengthen the case for economic planning, and even otherwise improve the prospects of the introduction of a full-fledged system of social insurance in this country.

Textile Training Scheme in Australia

Government to Establish Schools

AS part of an overall rehabilitation scheme for service men and women, devised for the purpose of training to suitable peace-time occupations upon discharge from the services, the Federal Government is preparing to establish textile schools in Melbourne, Sydney and Geelong.

The Gordon Institute of Technology at Geelong is to become the "university" of textiles, and will undertake advanced training equivalent to the highest English textile courses.

The establishment of intermediate schools in Melbourne, Sydney and Geelong will provide for part-time instruction for those about to enter or already engaged in the industry, and should supply a much-needed link in the chain of industry development.

It is presumed that these textile schools will train the student to the leading hand or possibly foreman or forewoman stage, and that the Gordon Institute would supply the full breadth of textile education required by technical executives.

Ready support is forthcoming from all sections of the textile industry to these proposals by the Government. There is, however, one link missing, as there is great need for a primary or elementary textile education which would give children of pre-school leaving ages a textile consciousness.

A practical suggestion which has already been put to the Government, and which will no doubt enlist considerable support from all sections of industry, is that elementary textiles should be added to the curriculum of all existing technical schools throughout the Commonwealth. A start could be made in those areas in which the manufacture of textiles is already carried out and gradually extended throughout Australia.

The cost of equipment for such a scheme would be exceedingly small, as the curriculum would be planned to instil merely the fundamentals of textile materials and the principles of the different methods of fabrication.—*Textile Journal of Australia.*

Industrial Fatigue—II

BY KRISHNA CHANDRA MOOKERJEE, M.SC. (Cal.),

The Tata Institute of Social Sciences, Bombay

(Specially Contributed)

THE laboratory investigations of muscular fatigue have been largely responsible for bringing to light many of the important factors hitherto unknown to the research workers in this field but having an important bearing on the general problems of identification and measurement of fatigue. Such experiments and investigations were mostly conducted on the freshly exercised muscles of newly killed frogs. As in the early history of the discovery of many useful and well-known medicines and injections, here also we find many unfortunate frogs laying down their lives for the cause of science and the betterment of the human race. Frogs were selected for such experimentation because of the comparative ease with which the leg muscles of these animals can be exercised by merely stimulating the motor nerve attached to the muscles in question with an electric current. When an electric current of low intensity (i.e., E.M.F.) is allowed to pass through the leg muscle of a freshly killed frog, the muscle will at once respond by contracting. This contraction, resulting from the application of the appropriate stimulus, may be regarded as the amount of work done by the particular muscle and can almost always be evaluated in terms of proper units, viz., ergs. It would be rather interesting to observe the nature of the subsequent contractions effected by a further continuance of the same stimulus. After the first contraction has been properly and adequately obtained with a particular stimulus, if another stimulus, i.e., electric shock, having the same intensity as the first one, is applied after a small time interval of, say, one second, between the two stimulations, a second contraction results which is found to be slightly larger than the previous one. In this way if the application of the stimulus of the same strength be continued for some time, after allowing a little time gap between the successive trials, a staircase diagram is obtained in which the important feature is that every contraction is greater than the preceding and earlier ones.

Results of Experiments on Frogs

In this description there are two points which deserve special attention. In the first place, it has been advised that each time before the application of the same stimulus (i.e., a stimulus having the same intensity) a time interval of preferably one second or a little more is to be given so as to ensure the successful operation of the muscle in question. The danger of allowing a longer time interval is obvious since in that case the proposed rest will adversely affect the subsequent contractions by directly counteracting the effects of fatigue, the seat of which in such a case is no doubt the muscle suffering from the cumulative effects of continued stimulations. The findings of the investigators in this field almost conclusively prove that the longer the time interval between the successive applications of the same stimulus, the less are the observable effects of muscular fatigue and hence greater shall be the resulting contractions, other conditions remaining the same. This greater and still greater contraction invariably indicate that the capacity of the muscle or its power to do further work increases more and more with successive stimulations. This is somewhat interesting but nevertheless is in full agreement with the laws of muscular activity. The almost continuous increase in the amount of contraction exhibited by a muscle under the foregoing conditions upto a certain point can be explained as due to the resistance being gradually and progressively lowered in the path of the incoming impulses as a result of the previous activity of the muscle which was of a continuous nature with small breaks. Theoretically it may be said that the maximum contraction for a particular muscle will always correspond to the minimum of the resistance lying in the path of conduction and this can be proved by the accumulated evidence from physiological researches. Popularly, it may be stated that a muscle is capable of doing more and more work if its inertia which results from inactivity can be sufficiently overcome and the resistance adequately counteracted. Both these states in a muscle are no doubt influenced and conditioned by any previous activity, either of a continuous or of a discrete type, to which the muscle has been subjected. Besides the popular and physiological explanations to account for the greater and greater muscular contractions effected by subsequent stimulations, other conditions remaining the same, some investigators have ascribed this state of a muscle with its increased capacity to the presence of some chemical substances which are formed in the muscle itself as a result of its previous activity. The formation of these chemical compounds, according to them, adds to the working capacity of the muscle by supplying it with a readily usable fuel in some easily assimilable form. The findings of these investigators in this connection further point out that two of the products thus formed, namely, carbon dioxide and lactic acid, in small quantities, have been found to increase muscular power and capacity for further work.

Secondly, the increased contractions referred to above cannot go on indefinitely nor for any length of time. On the contrary, there is a limit to these successive increases in the contractions and this limit is soon reached after the starting of the experiment. Once the maximum contraction is reached it does not begin to fall off immediately but remains stationary for a period as if to be observed and recorded and then falls off steadily and continuously till complete fatigue of the muscle ensues.

Recording Muscular Contractions

The contractions to which a reference has been made in the earlier section, in order to be studied and compared, must be recorded by some suitable means. The recording device must be of such a nature that the contractions, both original and successive ones, whatever be their amplitudes, in the course of an experiment, should automatically leave a trace which would admit of their being read and marked off for practical purposes. This need for an automatically recording device has been met by A. Mosso, who invented an instrument for this purpose, subsequently called by him an ergograph, which may be employed with very great advantage for recording the contractions of the muscles referred to above. Mosso's ergograph has been so devised that it can record very satisfactorily the work done by a particular muscle or at the most by a group of muscles of the body of an organism. A brief description of the instrument and its working has been provided elsewhere in this article for those who are specially interested in it. The actual tracing obtained during an experiment in the rotating drum of the instrument in the shape of a curve is technically called an 'ergogram' and in all cases comprises the individual strokes resulting from the movement of a particular muscle or a group of muscles activated by the same stimulus. Each and every stroke in such an ergogram represents the movement of the lifted weight hanging from one end of a string, the other end of which passes over a pulley (*vide* description of the instrument). The height of every stroke represents the actual height to which the suspended weight is raised every time due to the movement of the muscle under investigation. In order to calculate the amount of work done by a muscle or a group of muscles in such an experiment one has to measure out the length of each stroke very accurately and then to combine it with the magnitude of the lifted weight. The computations are very simple and based on the formulæ,

$$\text{Work done} = F \times D,$$

where "F" stands for the force and "D" for the distance to which the weight has travelled in doing a certain amount of work. This force is again to be resolved into the product of "mass" and "acceleration" or, in other words,

$$\text{Force} = \text{Mass} \times \text{acceleration}.$$

Fig. I below illustrates some typical ergograms obtained in a series of experiments conducted under strictly prescribed laboratory conditions. The four curves representing Fig. 1 have been obtained for the same subject but for different muscles of the body, e.g., arm, leg, finger, and hand as mentioned against each.

Brief Description of Mosso's Ergograph

In this instrument the forearm and hand (either left or right), together with all the fingers excepting the middle one, which would do the work in an experiment, are firmly and securely fixed with the palm of the particular hand in the uppermost position. Instead of the middle finger any other finger might be selected for the purpose, but this instrument has been so designed that it would be most convenient to use the middle finger only and no other. Next a string is connected with the uppermost part of the middle finger in the form of a loop and the other end of it passes over a pulley and is kept in position by suspending a weight at the free end. This pulley and the accompanying string arrangement is usually fixed at the edge of the table on which the whole instrument is supposed to work. The suspended weight need not be very heavy and differs from person to person and also sometimes from experiment to experiment. However, usually the weight is two to three kilograms with adjustable arrangement so that it might be increased or decreased if the necessity arises. When the instrument has been set as outlined above, the flexion of the free finger, in the present case the middle one, lifts the weight suspended by the string passing over the pulley and each of these lifts are recorded automatically on the smoked surface of a rotating drum, which has to be kept by the side of the subject, by a light pointer which connects the surface of the drum with the sliding string so that the movement of the weight and the corresponding string is imparted to it.

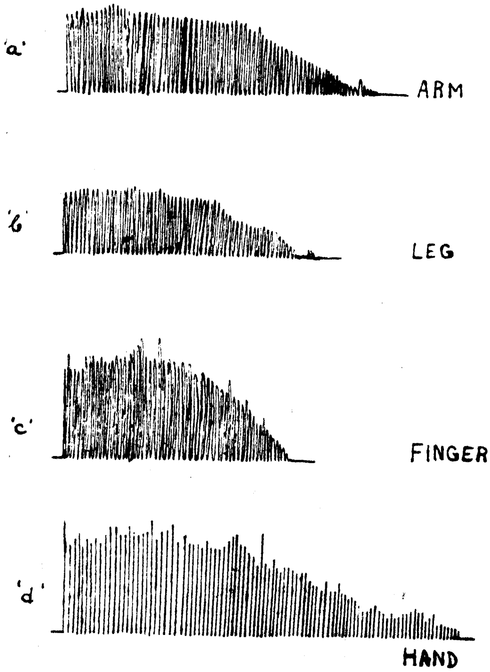


Fig. 1.—Typical Ergograms (After Yochelson)

It would be worth while to examine some of the important facts which have emerged as a result of the laboratory investigations of muscular fatigue with the help of Mosso's ergograph in the light of the curves presented here, and these are as follows:—

(1) These curves do not show the features of a "staircase" diagram as discussed in the earlier section. It should be remembered that the staircase diagram is only obtained from the results of electrical stimulation of the leg muscles of a freshly killed frog. In case of activating muscles with natural stimuli other than the electric shock, the nature of the curves would be as has been represented above in Fig. 1.

(2) All the four curves show a regular decrease almost from second to second, (which is the unit of time in the present experiments), in the height of the strokes. This almost progressive decrease in the height of the strokes can only be interpreted as the corresponding decline in the amount of work done by the muscles in question, since the length of strokes is the measure of work done.

(3) The fall in efficiency of muscular action in at least two of the four illustrations cited above, is observable only toward the end of the time period and then when it appears it is rather abrupt but afterwards it becomes somewhat steady so far as it affects the general nature of the curves under reference.

(4) The general trend of the fall in efficiency is that it is somewhat pronounced at first and then the rate slackens up again till towards the end it speeds up once more before finally exhibiting the effects of fatigue. This fatigue state is indicated by the decrease in the height of the strokes so much so that in the course of a few more seconds a point is reached, when the weight which the subject was so long lifting easily, can no longer be lifted by him, however much he may like to do so. This point represents the limit of work of the finger and may be regarded as the

exhaustion point of the finger, at which its capacity to do further work has been temporarily reduced to zero. In the curves represented above these are the points where the strokes have ceased to be recorded altogether and the marker tends to touch the horizontal base line, proving that the respective weights have stopped moving or sliding over the pulley. In the case of the finger muscles, however, this temporary incapacity does not last for a long time. A rest period of small duration would enable the muscle to work again after partially recovering from the effects of fatigue although this time the total amount of work done by the same muscle before the point of exhaustion is reached, is usually less than that done during the earlier and preceding period of the experiment.

(5) It has been observed that if some convenient rest pause is allowed between each contraction of a muscle, fatigue effects do not occur or at the most its chances are remote. The duration of such a rest pause would naturally depend on the particular muscle called into play and also in no small measure on the nature of the work required to be done by the said muscle. If, for example, the lifted weight be considerably heavy so much so that its lifting even for once or twice would cause the muscle to be fatigued, then in such cases the intervening rest period must be of sufficient duration so as to enable the muscle to recover completely from its fatigue effects; but in such cases it is doubtful if prolonged rest between successive contractions of the muscle would be able to protect the muscle from the effects of fatigue indefinitely or for all time to come. Nevertheless, the observation holds good in its entirety in the case of the smaller muscles when these work with usual weights, as they have been activated in the foregoing examples.

(6) When complete fatigue results, i.e., after the point of exhaustion has been reached, it requires a much longer period of rest to effect a complete recovery from it. This period in the case of the finger muscles has actually been found to be nearly two hours. But this period extends considerably, as has been found to be the case, if the subject, after he has been completely fatigued in the usual course, has been induced to make some further desperate attempts to lift the weight.

(7) The rapidity with which fatigue sets in a particular muscle is very largely conditioned by the number of contractions made in a certain period of time. This can be actually verified in any experiment by counting the number of contractions made by a certain muscle during a unit period of time. The larger the number the more rapidly the onset of fatigue. The amount of work that a muscle is capable of doing is likewise dependent upon the nature and amount of the contractions.

(8) It has been observed that fatigue of a certain muscle or group of muscles of the body adversely affects the working capacity of other muscles of the body.

(*To be continued*)

OFFICIALESE

A manufacturer proves unreasonable enough to complain of a circular lately received from a Government Department containing the following:—

"No such manufacturer shall during the said period supply cloth of any description which the manufacturers to whom these directions apply are permitted to manufacture by virtue of the preceding paragraph, if the total quantity of cloth of that description, which, during that period, has been manufactured by such manufacturers and supplied by them would thereby exceed or has already exceeded the relevant percentage of the total quantity of cloth of that description which the said manufacturers are permitted to manufacture by virtue of the preceding paragraph."

It is a piece of very ordinary officialese at least as luminous as an Act of Parliament, requiring not more than two wet cloths (and a reference to the preceding paragraph) for its due understanding. Doubtless this would not have been the manufacturers' own way of expressing the meaning. Maybe it is not even the best way, but it is the regrettable case that a Civil Servant caught in the act of translating his meaning into ordinary terms would very quickly be put on the carpet.—*Mercantile Guardian.*

Magnesium Chloride Industry in India

Part Played by the Pioneer Magnesia Works Ltd. in its Development

BY KHAN SAHIB J. S. CAMA, B.A. LL.B.

(*Specially Contributed*)

MAGNESIUM chloride is one of the most important ingredients required in cloth sizing. It is hydroscopic in character, and is used along with other substances like wheat starch, china-clay, tallow and zinc chloride for the purpose of weight-giving and helping to keep the sized yarn pliable and moist in its passage through the healds and reeds in the weaving process.

It is interesting to note that the natural mineral salt, with its wide and important range of industrial uses, is contained in sea water, natural brines and the waters of many springs. It also occurs in salt beds in combination with potassium and calcium chlorides.

Magnesium chloride is obtained as a by-product in certain chemical industries by the action of hydrochloric acid, which is a mineral containing mainly magnesium carbonate. It is, however, prepared on a large scale at Stassfurt in Germany as a by-product of potassium chloride. For a long time this was the only source of the commercial product, until Ballard, the famous French chemist, and several others who followed his researches, made this possible on a large scale from the mother liquors resulting from salt manufacture from the natural brines and sea waters.

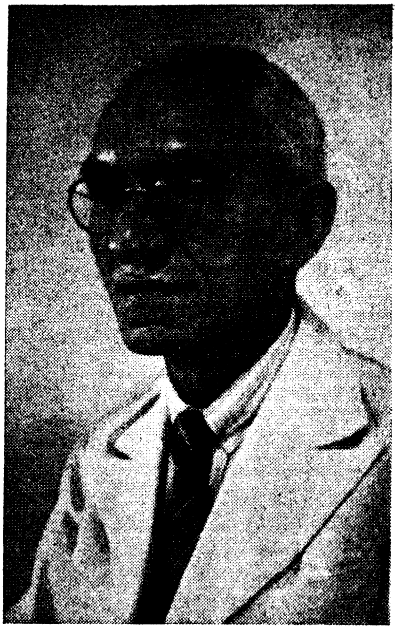
Before the last World War, Germany held the monopoly of the world's trade, and used to supply almost the whole quantity, amounting to about 5,000 tons, imported into India for textile purposes.

At Stassfurt there are large deposits of the mineral known as Carnalite which contains potassium chloride and magnesium chloride with traces of bromides and iodides. Magnesium chloride forms the greater portion of this carnalite, and has to be eliminated before the recovery of potassium bromides and iodides, so that it could be exported as a by-product at a little cost. It was also generally shipped as bottom cargo at low freight rates.

In 1914, as soon as the first World War started, the supplies dried up, and prices began rocketing high, with the result that Government's attention was drawn to the rich source of waste bitterns available in the Kharaghoda Runn after the salt manufacture was over, and steps were taken to examine the position and to invite tenders for its exploitation and supply to the mill industry. Mr. P. V. Mehd, M.A., B.Sc., succeeded in getting the first contract in 1915 on the basis of a certain royalty payment to Government. Thereafter the next contract was secured by a private firm consisting of the Hon'ble Sardar Sir Rustom J. Vakil, and Messrs. B. S. Lalkaka and P. V. Mehd, working under the name and style of the Pioneer Magnesia Works, on royalty basis. Crude bitterns as such were at first collected and removed to Ahmedabad, and in the absence of suitable arrangements for refining, were absorbed by the mills in the original form in place of magnesium chloride.

This arrangement continued from year to year till 1918 when a long-term contract was signed between the Government of India and the firm through the efforts of the then Director of Industries, Mr. (afterwards Sir) Robert Bell, I.C.S., and a factory was established at Kharaghoda with the advice and technical guidance of Dr. A. J. Turner and Principal Dawson of the Victoria Jubilee Technical Institute, Bombay. A motor rail car costing nearly £2,500 was also brought from England for hauling the bitterns from the agar to the factory. This had later to be discarded owing to its unsuitability for various practical reasons in favour of the present transport arrangements by means of hand-shunted railway wagons mounted with cisterns containing the liquid bitterns filled from the farans in the Runn.

The bitterns on arrival were transferred into big reservoirs at the factory and utilized for the manufacture of magnesium chloride according to requirements. For a number of years, this was the only product manufactured. Then in 1925, with the expert advice and assistance of Mr. Kapilram H. Vakil, the present Technical



Mr. Behramji S. Lalkaka has made his mark as a businessman and industrialist. He is engaged in the manufacture of chemicals such as calcium chloride, potassium chloride, bromine and magnesium chloride, and many others required for the Defence services and the mill industry.

He is the Managing Director of the Pioneer Magnesia Works, Ltd., Bombay, and the Pioneer Chromate Works, Andheri, which are pioneer enterprises in this country in their respective fields. Besides he is a senior partner of Messrs. Nowroji Pestonji & Co., Ahmedabad, who have been working as the Government Salt Agents at Ahmedabad and Kharaghoda since 1873. *He is also a Director of several other business concerns.*

Mr. Lalkaka is a member of the well-known Vakil and Lalkaka family of Ahmedabad, and is a managing trustee of many charitable and public trusts created by his grandfather, the late Sir Nowroji Pestonji Vakil, of Ahmedabad. He is of a most unassuming temperament, and has travelled many times abroad.

Director of the Tata Chemicals Ltd., of Mithapur, near Port Okha, the Kharaghoda bitterns were sent to Germany for critical examination and report, and the factory was also re-designed, and further improvements were made for greater efficiency and fuel economy under the advice of Mr. Fakirji E. Bharucha, the well-known mechanical engineer, and at one time acting Director of Industries.

A word or two about Kharaghoda where the magnesium chloride is manufactured will not be out of place. Kharaghoda is the name of an important place, on the borders of the little Runn of Cutch, where for more than threescore years and ten, the Pritchard Salt Works of the Government of India have been situated. The name " Kharaghoda " may well be derived from the word " Khara " meaning " brackish " and " Ghoda " meaning " wells," which connotes, so to speak, " brine wells "—judging from the nature of the sea brines percolating through the sandy desert with which the whole area is saturated. Geographically, Kharaghoda is 400 miles to the north of Bombay, 60 miles from Ahmedabad, and only 20 miles from the important railway junction of Viramgam, on the main B. B. & C. I. broad-gauge line, connecting Gujarat and Kathiawar. Geologically, Kharaghoda is a dried arm of the sea forming part of the barren sandy waste known as the Runn of Cutch on the western coast of Kathiawar, and extending about 80 miles from east to west, and 20 to 40 miles from north to south, covering an area of nearly 2,000 square miles and stretching right up to the borders of Sind. That this was at one time the bed of the navigable sea could be seen from records, and this is further proved from the small wooden remnants of boats and carts, etc., that are often found embedded in the lower strata in which shells, fossils and other marine deposits are also found. This sea-bed is supposed to have been raised by repeated cataclysms and earthquakes (giving rise to the present salty waste) some few hundred years ago, so that the sea which is the prime source of brine has now receded to about 60 miles further towards the Gulf of Cutch. The closest analogy to this may be the Dead Sea deposits in Palestine, which are immensely rich in all mineral salts running into millions of tons, so much so that the supplies are believed to be almost inexhaustible for all human needs for many a generation to come.

The common salt separates out by the evaporation of sea water by solar heat. The residual waste liquor after the separation of salt is generally known as bitterns, " mutterlage," or mother liquor, which becomes the raw material for the extraction of other valuable minerals, such as Epsom salt or magnesium sulphate, magnesium chloride, potassium chloride and bromine. The bitterns are left in the salt pans after sodium chloride (common salt) is formed. It is, therefore, a by-product of salt manufacture, being usually found in the ratio of 1 to 12 at Kharaghoda, where the manufacture of salt on a large scale is carried on under the control of the Salt Department of the Government of India. The mode of manufacture here differs considerably from that in other places in the Presidency.

The Pritchard Salt Works at Kharaghoda were opened in 1873, i.e., about 72 years ago. They produce on an average about 35 to 40 lakhs of Bengal maunds of " Badagra salt."

The salt manufacture begins after the rains are over, when the brine with which the sandy soil is saturated is raised and filled into salt pans to a depth of 9 inches to a foot, and is allowed to evaporate over a period of 6 to 8 weeks. Incrustations of salt are formed at the bottom, and the floating bitterns or mother liquor is then drawn off and conducted into separate channels known as " farans." Fresh brine is then superadded by slow degrees, until actual salt cubes are formed, which are ready for extraction and storage by April. The Salt Works are covered by a number of railway sidings about 40 miles in length, and are a regular hive of industry in the busy working season from November to May each year, giving employment to several thousands of labourers who are known as " agarias."

The bitterns which are drawn off to the extent of several thousand tons annually during salt manufacture, are exceedingly rich in magnesia salts. They are now utilized for the manufacture of magnesium chloride, the main use of which is as a sizing agent, required by the textile mills all over the world.

The bitterns left in the pans, after the manufacture of common salt from sea water, contain more of Epsom salt and other ingredients. The brines vary considerably in composition even in the adjacent wells.

It may be of interest to note that another up-to-date factory in India for the weaning of magnesium chloride (mainly for export) and its allied products, viz., Epsom salt and potassium chloride from sea water, was put up by the Pioneer Magnesia Works at Mithapur in 1929, in conjunction with the Okha Salt Works Ltd., under the able and expert guidance of Mr. Kapilram H. Vakil, a chemical engineer of repute. This was, however, later absorbed and bought over by the Tata Chemicals Ltd. in 1939, when their big chemical plants came to be established at Mithapur.

The first stage of operation at Kharaghoda begins with the collection of the bitterns in the "agars," and their subsequent transport to the reservoirs of the factory for some time by means of a (motor) rail wagon with a special tank attachment, and now in railway wagons with cisterns mounted on them. As the bitterns are allowed to concentrate further in the reservoirs, the collection is carried out considerably in advance of their utilization at the factory. The manufacturing operations are designed to eliminate some common and other salts, as well as suspended clay and other heavy impurities. The latter settle down in the reservoirs. The bitterns, now very rich in magnesium chloride, are then passed through a boiling process. The magnesium chloride is finally recovered as a hot liquid, which is poured into strong galvanized drums, where it solidifies, and is ready for export from the factory.

The company's premises occupy an area of about 40,000 sq. yards of land, on which are situated their factory buildings, workmen's chawls, drum-making plant, and store houses, as well as two well-built bungalows for the use of the proprietors and the supervising staff. Huge reservoirs, cemented and stone-paved throughout, have been constructed with a capacity of a few thousand tons of bitterns. A stock of several thousand drums of the finished product is always kept ready to meet any demand.

The magnesium chloride separates out from its saturated solution as transparent, silky, needle-shaped crystals. These crystals are formed by the union of one molecule with six molecules of water, generally called water of crystallization. The commercial quality of magnesium chloride contains this water of crystallization, and it is for this reason that the analysis of the commercial samples shows about 52 per cent. of combined water or water of crystallization.

When the crystals are formed, a limated crystalline solid is formed. The water of crystallization is not removed by simple melting, and the substance still remains as hexa hydrate.

The fused quality is a white semi-transparent mass having an appearance similar to white paraffin wax.

Magnesium chloride rapidly absorbs moisture from the air, and it is decomposed on heating to a high temperature, and has a bitter and saline taste.

The Kharaghoda magnesium chloride is specially prepared for textile use, and is available in the following forms:—(1) Crystals, (2) fused crystals, (3) semi-fused solid, (4) flakes, and (5) solid fused. All the fine qualities contain water of crystallization. A chemically pure 100 per cent. quality is not in technical use. All the high grade commercial qualities contain generally 98 per cent. magnesium chloride as hexa hydrate.

In 1928 intensive research was carried on by the Pioneer Magnesia Works Ltd., with the help of Prof. D. D. Kanga and Dr. M. S. Shah of the Gujarat College, at Ahmedabad, at a cost of nearly Rs. 10,000 solely for the production of Epsom salt and potassium chloride obtainable from the Kharaghoda bitterns, but although the results were successful, no practical effect could be given to them owing to innumerable difficulties. Besides, the layout of the Pritchard Salt Works, which are so widely spread out, was never designed for by-products manufacture. In 1935, the firm was turned into a private limited company, with Mr. B. S. Lalkaka as Managing Director and Mr. F. R. Moos as Manager and Secretary, working under a Board of Directors.

Since 1925, a series of attempts have been made to export the Kharaghoda magnesium chloride to foreign countries, with the result that before the present world war began in 1939, the Company had already succeeded in sending out more than 2,000 tons annually to Great Britain and distant parts of Europe like Holland, Denmark, Sweden, Czechoslovakia, and even to Australia and South Africa, in the teeth of German competition; in spite of serious difficulties during the present war they are still being sent out to Britain and the Dominions, subject to shipping and other export restrictions. This is a great achievement, especially as apart from any raw materials magnesium chloride is one of the very few finished articles ever to be exported from India to Western countries; and that would tend to show that in quality and price, the company has made a name for itself and can hold its own against any foreign competition. The industry had, however, to pass through bad times, and even to go to the Tariff Board for protection on three occasions, viz., in 1924, 1928 and 1938. Its claim for protection, however, had been turned down on the first two occasions, and was only conceded on the third occasion, and the then existing 15 per cent. *ad valorem* duty on foreign imports which had been removed to placate the mill industry was instituted as a protective duty. This has, however, considerably helped to consolidate and develop the industry. Here it will not be out of place to quote the following passage from a brochure entitled " Tariffs and Industry " by Dr. John Matthai, the well-known economist and industrialist, who was at one time President of the Tariff Board and Director-General of Statistics of the Government of India. He says:—

> In the whole course of the Tariff Board's existence, there has been only one case in which the Board has declined to grant protection to an industry on the ground that it will not be able to dispense with protection eventually. This is the magnesium chloride industry. The Tariff Board declined to grant protection to the industry in 1924 on this ground. The Government accepted the Tariff

Board's conclusion. Three years later, in pursuance of the Government's policy of reducing or abolishing the duties on materials required by the cotton textile industry, even the revenue duty on magnesium chloride was removed. In 1928, the industry came up again for protection, and in this inquiry it was found by the Board, on a review of costs and prices, that the industry would not merely be able to dispense with protection ultimately, but that it did not require any greater assistance than the restoration of the original revenue duty. The case of the magnesium chloride industry provides an interesting illustration of the practical difficulties involved in the application of the crucial conditions on which Discriminating Protection is based.

The very fact that this comparatively infant industry has been able to keep its head above water in spite of the 15 per cent. import duty being removed by the Government is due to the able management, zeal, foresight, perseverance, dynamic energy and indomitable will of one of its founders, Mr. B. S. Lalkaka, the Managing Director of the company. Mr. Lalkaka's acute business acumen, tact and ability have enabled this infant industry to steer clear of the shoals in the face of dangers from Germany, Japan and Palestine; and the foundation is laid on a firm basis, which would enable the industry to make headway through storm and stress.

The two most widely known uses of magnesium chloride are for cloth sizing, and for use as jointless composition flooring along with magnesite, as in Europe and America, and in other more advanced countries.

The total normal consumption of magnesium chloride in India may be roughly put at 7,000 to 8,000 tons per annum, but owing to the Size Control Order, this has now considerably gone down, and could only be estimated at about 3,000 tons maximum. The production, on the other hand, has increased materially, for instead of the one factory at Kharaghoda, magnesium chloride is now produced in fair quantities at Mithapur, near Port Okha, in Kathiawar, and also at Kuda nearby in the Dhrangadhra State. This has naturally led the Pioneer Magnesia Works Ltd. to carry on further investigations to see how far the use of magnesium chloride in other ways could be enhanced by utilizing this as the basis for various other new products and derivatives, and for this purpose, they have spent a few thousand rupees by providing research scholarships at the Department of Industries, the Royal Institute of Science, and last but not least, at the Department of Chemical Technology in Bombay, where a Fellowship is also established. With their help, and in close collaboration with these technical advisers, the company's staff, consisting of Mr. M. S. Chudgar, B.Sc., Works Manager, and a few other chemists including a B.Sc. (Tech.) with good qualifications, have succeeded in manufacturing, besides magnesium chloride, several other products, amongst which may be mentioned the following:—

Magnesium chloride—for cloth sizing and flooring use.

Epsom salt—for textiles and medicinal use.

Kainite and potassium chloride—for fertilizers and bichromate industry.

Magnesium carbonate—for use as a filler in the rubber (light, medium and heavy) industry and in 85 per cent. magnesia and dentifrice.

85 per cent. magnesia—for lagging of pipes and boilers for heat conservation.

Calcium chloride—for refrigeration. This is being supplied almost entirely for the Defence services, and to the ice factories and air conditioning plants, under orders of the Chemicals Directorate, New Delhi.

Potassium chlorate—for medicinal use, and as an explosive, and for use in match factories.

Bromine and bromides—for medicinal purposes, and for photographic and other uses.

Calcium carbonate—for dentifrices, and as a food preservative, etc.

Barium chloride, and so on.

Owing to the scarcity of raw materials and various restrictions as to transport and other priorities, many of these plants are not fully running, though the company is not without hope that when normal peace conditions are restored, it would be possible to work them economically and efficiently against all ordinary healthy competition, whether local or foreign. In the past, the magnesium chloride industry in India had been seriously threatened with extinction both from Japan and Germany, so much so, that in order to kill this nascent infant industry, the product was even dumped on the Indian market at below cost, which would not even cover the Government royalty payable by the Pioneer Magnesia Works Ltd. The whole account of this unequal fight which the industry had to put up against the German Magnesium Chloride Syndicate will be found published in the various Tariff Board Reports.

Magnesium Chloride in Textile Industry

Every sizing master knows the properties he wishes to impart to his yarn, but the problem of how best these may be obtained is not always easy of solution, and varies according to the nature of the yarn and the general conditions.

Strength and softness are the primary qualities to be obtained. Since the early days of spinning, various mixtures have been used, some with indifferent effects, others with better success.

An additional object of the size is to give the yarn a good " feel," and also, for commercial purposes, added weight. The addition of magnesium chloride to the size softens and strengthens the yarn, and generally much improves the subsequent weaving. Among the common ingredients of the size are:—

Flour, china-clay, tallow, starch, magnesium chloride, zinc chloride and Epsom salt.

Where the weather is very dry, a larger proportion of magnesium chloride is used. For instance, in the Bombay mills 30 to 40 per cent. size is used, whereas in Ahmedabad, even upto 100 per cent. was common. The drier climate of Ahmedabad entails the use of more magnesium chloride.

The Pioneer Magnesia Works Ltd. have been ably serving the needs of the country, and have been providing the mill industry with a product of good quality, equal in all respects to the best imported article and at a uniformly low rate, without the slightest thought of war-time profiteering even though the manufacturing costs have gone up by leaps and bounds. Whereas in 1939, just before the present World War, the average prices of magnesium chloride were round about Rs. 4-8 to Rs. 4-12 per cwt. f.o.r. Bombay, the present basic rate has not gone beyond Rs. 6-8 to Rs. 7 despite very many handicaps and increases in cost all round. That shows how the company has done its level best to maintain prices as low as possible without caring to take undue advantage of its position.

The Pioneer Magnesia Works Ltd. have also in view a post-war programme of development, and would very much like to re-design their present plants on more model lines, and to add a few other important chemicals which could be usefully manufactured at their Kharaghoda Works, provided there is any reasonable assurance of support from Government.

Thomas Korula Bombay

THE factories of Thomas Korula have been shifted to their own premises at 249 Worli, Bombay. The new factory is built to suit their requirements in the most up-to-date fashion. The rubber factory is equipped with the latest machinery and turns out gloves for industrial and medical uses, waterproof sheetings, rubber and ebonite rollers, dobby cord, elastic webbing, rubber thread and cord, moulded goods of all descriptions, gharry tyres, trolley wheels, rubber insulation, etc.

The non-ferrous metal factory is producing all gauges of wires, rods, etc. It is equipped with the latest type of tilting and annealing furnaces, rolling mills, multiple reduction draw benches, etc. They do refining, casting and rolling of non-ferrous metals.

To-day the factories are keeping pace with the Services by devoting their major time to the production of Government and essential Services' requirements. In fact, in certain items they are the only firm in India capable of producing them. In the wake of peace it will be their endeavour to revert to the service of the general public, whose appreciation of their services in the past has always been considered favourably.

COTTAGE INDUSTRIES INSTITUTE

Gulzarbagh, Patna

THE Cottage Industries Institute, Gulzarbagh, Patna, has contributed largely towards the improvement of the handicrafts of the Province of Bihar by training skilled artisans and organizers; by introducing improved appliances and supplying raw materials and technical advices; by conducting experiments with a view to evolving improved methods of manufacture, and by testing yarn and cloth samples sent by the handloom weavers from all over the province.

History

This Institute is the result of the expansion and development of the cotton experimental and testing station started at Ranchi in 1922, which, with the removal of the Headquarters of the Department of Industries to Patna, was transferred to Gulzarbagh. The Institute in its present form was formally opened by Lady Wheeler on the 17th March, 1925.

System of Training

The Institute is run on commercial lines and under workshop conditions. As designs play an important part in the success of any handicraft, freehand drawing, painting and designing are compulsory subjects for students of all sections.

Control and Supervision

The Institute is directly under the Department of Industries and the Textile Expert to the Government of Bihar—Mr. N. P. Neemuchwalla, F.R.S.A. (Lond.), M.I.E.E. and an Advisory Committee appointed by the local Government.

The Superintendent of the Institute is in direct charge of the offices.

Admissions to the various departments are usually made at the commencement of the session in January of every year and are mainly restricted to natives of the province, preference being given to sons of artisans having previous training in the trade in which they are to specialize besides having necessary qualifications. Students from other Provinces and States are also admitted by special permission of the Director of Industries if they apply through the Director of Industries of their respective Provinces or States. The number of students admitted every year and the number of stipends available are as follows:—

Subject of industries taught	Number of students	Number of stipends
Cotton spinning and weaving—		
1st year	20	16
2nd year	15	12
Dyeing and Calico printing—		
1st year	16	12
2nd year	13	10
Tailoring—		
1st year	16	12
2nd year	13	10
Pottery manufacturing ..	12	8
Cane furniture manufacturing.	16	12
Carpet weaving	14	10
Knitting	14	10
Durree weaving	8	7
Newar and tape weaving ..	13	10
Lacquered toy making ..	14	12
Wooden toy making	10	8
Cardboard toy making ..	16	14
Paper making	14	10

Cardboard Toy Section.

Pottery Section.

Lady Rutherford, accompanied by Mr. N. P. Neemuchwalla (left), Textile Expert to the Government of Bihar, visiting the Cottage Industries Institute.

Students are required to deposit in the postal savings bank every month two annas per rupee out of the stipends paid to them. These amounts are paid to them on satisfactory completion of their training for the purchase of tools and raw materials required for starting such industries.

Hostels

Out-station students are given preference in the matter of admission in the hostel, which provides free accommodation for 100 boys and 12 girl students. Hindu and Mahomedan kitchens are provided in the hostel. There is a separate hostel for girl students.

Examinations and Diplomas

The students attend the lectures and practical classes for at least 75 per cent. of the working days for qualifying themselves to appear at the examination. Successful candidates are awarded diplomas of competency.

Examinations in theory, practice and commercial subjects are conducted by outsiders.

Lady Rutherford, wife of the Governor of Bihar, paid as many as four visits to the Institute during her short stay of two months in Patna. The Institute have supplied to the Government House, Patna, silk curtains, flower vases and other textile materials.

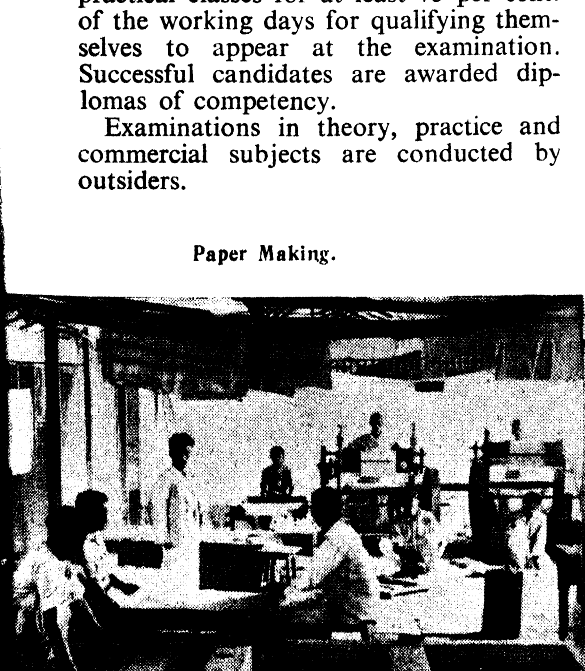
The photographs now published will give readers an idea of the useful work being done by the Institute.

The Institute has just passed through a very difficult year. Scarcity of raw materials, dyes and chemicals, spare parts of machines and knitting needles and their high prices affected its working; shortage of coal and of transport were other difficulties. Yet the year 1943 was notable for the institution of another centre for the technical training scheme of the Government of India. The Cottage Industries Institute trained 114 boys in textile re-fitting.

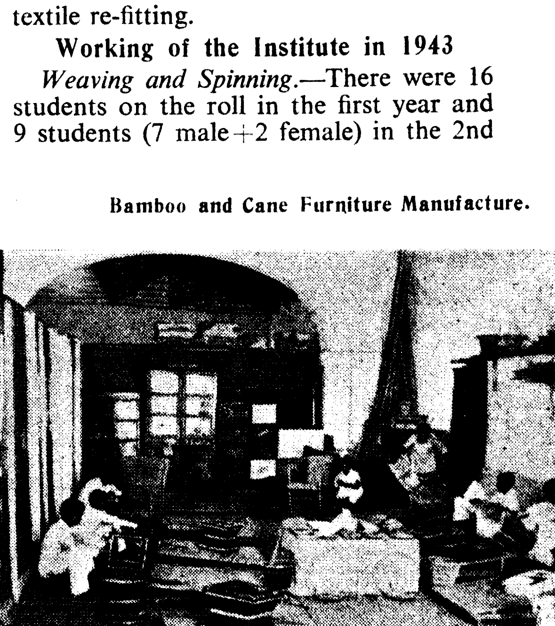
Working of the Institute in 1943

Weaving and Spinning.—There were 16 students on the roll in the first year and 9 students (7 male+2 female) in the 2nd

Paper Making.



Bamboo and Cane Furniture Manufacture.



year class. Besides the above there were two casual students deputed by the Nepal Government for training in sizing, dobby and jacquard weaving.

The section produced many improved designs of *sari* borders, coatings and towels, etc. Five yarn samples and 17 pieces of cloth samples received from different parties were also tested and results communicated to the parties concerned. Many sleys and other loom parts made by local carpenters were tested in the section before they were supplied to the parties. Necessary technical help was rendered to ex-students of the section and other interested parties from time to time.

Dyeing and Printing.—There were 12 students on the roll in both the sections: 7 in the first year and 5 in the second year. They were trained both in theory and practice according to the approved syllabus. Students were also taught indigo and alizarine dyeing.

During the year new varieties of shades on 2/80s yarn were dyed under the order of the Director of Industries. In addition to the matching of shades for the manufacture of *purdah* shades, this institute dyed the entire yarn of the Bihar cottage industries and no order was placed outside. Samples of new designs of printing were prepared.

Necessary technical help and assistance were rendered to the ex-students who have started their own dyeing and printing concerns.

Durrie and Carpet (including newar).—Eighteen students were admitted into both the sections, ten

Top to bottom :—

Tailoring Section.
Warping and Sizing.
Winding and Warping.
Weaving Section.

in the carpet and eight in the *durrie* section during the period under report.

New designs of *durries* and carpets, approved by the Director of Industries, were produced in the section during the year. Necessary technical help has been rendered to the ex-students of the section from time to time.

Knitting.—Ten students were admitted into the section in January 1943 and were trained in theory and practice according to the approved syllabus.

Experiments were carried on on the flat machine, and *ganji* cloth was produced with the tuck stitches. The double rib cloth was also tried on this machine, which was successful; sweaters and *ganjis* were produced out of this material. Some of the ex-students were helped in securing employment, Machines of Rajendra Hosiery and Aghore Nari Shilpa Pratisthan were examined and set right.

Tailoring Section.—There were 20 students in both the classes on the roll at the beginning of the year.

Attempts were made to train the second year students along with the ex-students of this section in the mass production of garments for which orders were secured from the "Civmil" Hostel, Bihar College of Engineering for 140 sets of dosuti uniforms (shirts and shorts). The proprietor of Messrs. Agarwal Fancy Stores of Moradpur was given help and advice in starting a ready-made clothing factory. In this workshop many ex-students are working as cutters, fitters, tailors, etc.

Top to bottom:—

Dyeing Section.
Durree Weaving.
Knitting Section.
Calico-Printing Section.

Indian Central Cotton Committee

Annual Report for the Year ended 31st August 1943*

HOW the extension of the war and the consequent closing of the export outlets for short-staple Indian cotton gave a great fillip to the efforts of the Indian Central Cotton Committee at improving the quality of Indian cotton is well brought out in the latest annual report of the Committee. The year under review witnessed a phenomenal increase in the area under staple cotton, particularly *Jarila* in the *Oomras* tract. The area under improved cottons rose from 5,663,000 acres, or 24 per cent. of the total cotton acreage in 1938-39 to 10,382,000 acres, or 54 per cent. of the total in 1942-43.

The total area under cotton in India during the year was 19,203,000 acres, showing a decrease of 4,948,000 acres as compared with the previous year. The decrease was largely due to the loss of export outlets for short-staple cotton as a result of Japan's entry into the war and the "Grow-more-food campaign" started on a country-wide scale. The total estimated outturn for 1942-43 was 4,702,000 bales, against 6,127,000 bales in 1941-42.

From the point of view of the grower, special significance attaches to the Seed Distribution and Extension Schemes of the Committee, as they form the real link between the Experiment Station and the cultivator. The total amount so far spent by the Committee on such schemes amounts to some Rs. 15 lakhs. During the period under review, there were seventeen seed distribution and extension schemes in operation in the various cotton growing provinces and States.

Here is what the Report has to say on a post-war policy for cotton :—

"Although it is difficult to forecast with any degree of accuracy what the requirements of the various markets for cotton after the war may be, it would seem desirable to lay down the broader principles that should be followed, so that research and extension work may be directed accordingly. India at present consumes annually over 6 lakhs bales of foreign cotton, mostly of staple above 1″, while the production in the country of similar cotton up to 1-1/16″ in staple amounts at present to only some 161,000 bales, and it may perhaps be well to consider whether the area under such varieties cannot be increased by the production, by hybridization or acclimatization, of suitable long-staple varieties that would meet the requirements of the Indian mill industry for such cotton. If this could be done, it may help to ease, to some extent, the position of medium staple varieties. Some very good progress in this direction has already been made in the Madras Province where the varieties Co. 3 and Co. 4, with staple length of 1-1/32″ to 1-1/16″, are making headway in the southern districts of the Province, the production in the past season being estimated at 19,000 bales. In the Punjab, too, there may possibly be further scope for increasing the area under Punjab-American 289F/K.25 and Punjab-American 289F/43. Whatever policy is decided upon, it is of the utmost importance that the requirements of the Indian mill industry which, as has been stated above, is the best customer of Indian cotton, must be constantly kept in mind and efforts made to cater for it as fully as possible. In this connection, it may be mentioned that recently there has been a phenomenal increase in the area under *Jarila ;* it may be well, at this stage, to make an estimate of the extent of the total requirements of the mills for this cotton, so that, if possible, the production may be regulated accordingly. The question may perhaps also be examined as to whether it is desirable that the crop in excess of the mill requirements should consist of such qualities as are least likely to come into direct competition with the rest of the cotton-producing world. Yet another question is whether a maximum limit on the total acreage should be placed, say, during the next five years."

Research

A number of research schemes, among which the most important are those for cotton breeding for the improvement of quality, are in operation in the various cotton growing Provinces and States. The majority of these schemes are financed entirely by the Committee, while the cost of others is borne partly by the Committee and partly by the Provincial Government or State concerned. Research on cotton technology is carried on at the Committee's Technological Laboratory. In addition, trained technological assistants are posted at the Cotton Research Stations at Lyallpur, Mirpurkhas, Cawnpore, Surat, Dharwar, Coimbatore and Parbhani, to help the botanists in charge in their work of breeding improved varieties of cotton.

Research on cotton technology and the testing of cotton fibres, yarns and cloth are carried on at the Committee's Technological Laboratory. There was a noteworthy increase in the use made by the cotton mills and firms of the facilities offered at the laboratory for making fibre and spinning tests. The total number of samples received for tests was 1,129, on which 234 reports were issued during the year. Fundamental research on cotton is carried on at the Institute of Plant Industry, Indore, which was established with the object of providing a central research station in the black soil areas of the Malwa plateau. In April 1940, the working of the Institute was reorganized as a result of which fundamental research on genetics and plant breeding, physiology and field plot technique is carried out under a special scheme, Cotton Genetics Research Scheme.

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*Price: Rs. 2-0-0.

Wood Working for Textiles

Bobbins and Shuttles

BY "TIM. BOBBIN"

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A SHORT time ago there was a certain amount of controversy in the columns of the daily Press in connection with the subject of wood bobbins for textile purposes. In the July number of this *Journal*, extracts from papers read at the First All-India Textile Conference, Bombay, were published under the heading "Growth of Subsidiary Industries." These extracts prove that "bobbin making" in India has "got a move on," as follows:—

"Nearly 500 small and big bobbin factories have been established since the war started." . . . "Some of the factories have been established with big capital expenditure, and one estimate is that the total capital involved in bobbin manufacture is about Rs. 50 lakhs." . . . "With no knowledge of the skill and technique necessary to manufacture bobbins, so far approximately 191,000 gross of bobbins of different types, from slubbing to ring weft and Wadia pirns, and special types have been supplied to mills," at to-day's prices, approximately Rs. 1,15,00,000." . . . "Some of the manufacturers have no doubt designed their own plants for seasoning wood." . . . "The Forest Research Institute have done what they could to assist manufacturers in supplying suitable wood, but with little success." No wonder then at the controversy in the daily Press, aforementioned, which was mostly made up of complaints about the quality of the bobbins. In connection with the latter mentioned industries many new makers *are* now engaged in the work. Naturally there *will* be minor difficulties for a commencement.

The writer has been put in touch with a few of them who *have* encountered difficulties, and perhaps a few remarks upon such difficulties, and means of overcoming them may be generally useful. In the first place, the bobbins at first submitted for inspection and report were made for the ring frame spindles, and the outside workmanship was all that could be desired. The inside of a ring frame pirn, however, contains its "gripping" qualities or properties. It must be made to fit tight or "grip" the spindle point or tip for about half or three-quarters of an inch from the top downwards. The bottom of the pirn must sink easily into the cup that is on the spindle to receive it. It must never "*bottom*" this cup, thus always leaving space or distance for the pirn to sink lower as the gripping portion either wears or gets compressed to such an extent that sinking takes place. The operatives must be taught that the "waste" of yarn must *not* be allowed to "choke" or fill this cup, thus raising the pirn up on the spindle and preventing the gripping at the tip. The bobbins for "speed frames," either slubbing, intermediate or roving, are a much easier proposition to make and finish. The length and diameter are made to the sample, with a similar "collar" or swelling top and bottom. The hole or bore at the top is to give a nice easy fit to the speed frame spindle, and the bore at the bottom is to be made the correct size and shape to receive the creel peg upon which it has to work in the next process.

An important feature about these bobbins is the fact that they are not tight upon the spindles like the ring frame pirns, but are driven by the peg that is fixed in what is known as the "bobbin wheel." Herein lies a feature that *must* be observed strictly. The bottom end or rim of the bobbin is slotted in four places, one of which is to sit upon the above-mentioned peg, and these slots *must* be made to slip easily on to the peg (without being too "slack"). On the other hand, if these slots are too small to fit the peg, then the bobbin bottoms get broken and spoiled, owing to the "frame tenters," forcing them down upon the pegs. This spoiling of bobbin bottoms resulted years ago in the introduction of patented metal shields. Even with shields on, many bobbin bottoms get damaged. This is not the fault of the shields, but it is the fault of the pegs that are screwed or riveted into the bobbin wheels. Every care should be taken that the pegs are the right size for the bobbin slots. When pegs get worn away or broken, new pegs are obtained to replace them, *and sometimes these pegs are too thick* for the slot in the bobbin bottom. The frame tenter, however, " hammers " the bobbin down on to the peg, *and makes it fit*, spoiling both the bobbin and the peg. Care should always be taken that speed frame bobbins are of the correct diameter. The writer has discovered some speed frame bobbins that should have been of 1⅜" diameter to be actually 1½" and others 1¼", all working together; *this is fatal to good work*. Certainly the fault *in the first place* is in the making of the bobbins. If they are expected to be 1⅜" diameter, then 1⅜" they should be. In the second place, the fault lies with those who passed the bobbins into work.

Every new bobbin should be gauged previous to being passed into the storeroom of the mill; and any not correct should be returned to the maker. Another kind of bobbins known as warper's bobbins is in some respects much simpler or easier to make. They consist of two flanges, and a connecting length or barrel. The length of this barrel represents the " lift " and must coincide with the " lift " or " traverse " of the winding frames which have to fill them with yarn.

The diameter of the flanges must coincide with the gauge of the winding frame spindles, the gauge of the beaming frame upright creel, and the gauge of the doubling frame creel; that is, if all these machines have to be wound for.

Warper's bobbins do not present much difficulty in manufacture. The principal detail to notice is the making of the flanges, and their fixing. The fixing should present nothing new or difficult to the " wood turner." To prevent the flanges from " warping " or " twisting," however, it is usual to make them in sections, laying the " grain " of one section in the contrary direction to that of the other. The fixing medium, either glue or cement, should be waterproof in order to withstand the effects of moisture which the bobbins may possibly come in contact with (owing to " conditioned " yarn). One thing the writer would like to mention here. Wood bobbin making of any kind or type, always calls for *one* extra particular process in order to make a real success of it, and that is, *use well seasoned wood or timber*.

The writer had the privilege and pleasure several years ago of being shown through the works of one of the leading firms of bobbin makers in the world. Most of the machine tools were of the usual type used by " wood turners," and the possibility, *nay, the probability* was that the workers themselves were no more skilful than the majority of other wood turners. This firm, however, have a world-wide reputation for *excellence* of output. The Directors pointed out with pride, in a room (specially provided and fitted up for the purpose), piles of wood, cut into strips or blocks, for making the many types of their produce, and piled in a fashion that would allow the free and easy passage of air around every side, and end of the blocks. The wood in these piles had been there *seven years* and as one pile was removed it was replaced by another for similar work. We know that we cannot teach wood turners anything about the importance of " seasoning " their wood, but we may be excused for emphasizing *the importance of seeing that it is done*. We also know that there are many wood turners in India whose skill with *hand tools*, and also with *machine tools*, compares favourably with the workers of any other country in the world.

Over thirty years of practical daily oversight and advising of these workers, however, leave one with the impression that *strict oversight is necessary to keep things up to " concert pitch*." Again, it is not the workers who are to blame if they have raw material provided for them which is unsuitable for the purpose it is intended for. The writer cannot illustrate this phase of the subject and give figures showing the variations in bobbins owing to being subjected to different temperatures in the working stage; but in connection with the sister industry of shuttle making, he recently had to investigate a complaint of unsatisfactory shuttles. The accompanying particulars and figures, which he prepared for that case, may be of interest to wood workers in general, and also to shuttle users, and shuttle buyers.

Detailed Tests of 6 Shuttles

Differences in Weights

Numbers of shuttles	Weights straight out of oil steep in storeroom *Wiped only*	Weights after being subjected to dry heat Temperatures—150° to 172°	Difference per cent.
1	12 ounces 2 dwts. 0 grains	11½ ounces 2 dwts. 15 grains	—10.77
2	12 ,, 1 ,, 15 ,,	11¾ ,, 2 ,, 21 ,,	— 8.45
3	12 ,, 0 ,, 9 ,,	11¾ ,, 2 ,, 0 ,,	— 8.44
4	12 ,, 3 ,, 5 ,,	11½ ,, 3 ,, 2 ,,	—11.0
5	11¾ ,, 2 ,, 8 ,,	11½ ,, 0 ,, 8 ,,	— 3.17
6	11¾ ,, 2 ,, 6 ,,	11½ ,, 0 ,, 4 ,,	— 3.2

Numbers of shuttles	Weights after being subjected to dry heat Temperature—150° to 172°	Weights after having been in weaving shed 5 hours under working conditions	Difference per cent.
1	11½ ounces 2 dwts. 15 grains	11¾ ounces 0 dwts. 14 grains	+1.4
2	11¾ ,, 2 ,, 21 ,,	11¾ ,, 3 ,, 3 ,,	+ .11
3	11¾ ,, 2 ,, 0 ,,	11¾ ,, 2 ,, 3 ,,	+ .06
4	11½ ,, 3 ,, 2 ,,	11½ ,, 3 ,, 8 ,,	+ .11
5	11½ ,, 0 ,, 8 ,,	11½ ,, 0 ,, 0 ,,	— .015
6	11½ ,, 0 ,, 4 ,,	11½ ,, 0 ,, 2 ,,	— .004

Comparisons of Variations 6 Shuttles, 3 Tests

(1) *Original Size*, (2) 5 *Hours in Engine House*, (3) 5 *Hours in Shed*

Shuttle No.	Test No.	Measurements							
		Across Top		Across Bottom		Down Front		Down Back	
		1	2	1	2	1	2	1	2
		Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
1	(1)	1-9/16	1-19/32	1-22/32	1-23/32	1-7/32	1-7/32	1-7/32	1-7/32
1	(2)	1-19/32	1-37/64	1-22/32	1-23/32	1-7/32	1-7/32	1-7/32	1-15/64
1	(3)	1-19/32	1-19/32	1-22/32	1-23/32	1-7/32	1-7/32	1-7/32	1-7/32
2	(1)	1-19/32	1-19/32	1-22/32	1-23/32	1-7/32	1-7/32	1-8/32	1-8/32
2	(2)	1-19/32	1-20/32	1-22/32	1-23/32	1-7/32	1-7/32	1-15/64	1-15/64
2	(3)	1-19/32	1-20/32	1-22/32	1-47/64	1-7/32	1-7/32	1-15/64	1-8/32
3	(1)	1-19/32	1-20/32	1-22/32	1-23/32	1-7/32	1-7/32	1-18/32	1-8/32
3	(2)	1-19/32	1-20/32	1-22/32	1-23/32	1-7/32	1-7/32	1-8/32	1-8/32
3	(3)	1-19/32	1-20/32	1-22/32	1-23/32	1-7/32	1-7/32	1-15/64	1-15/64
4	(1)	1-19/32	1-20/32	1-22/32	1-23/32	1-7/32	1-7/32	1-8/32	1-8/32
4	(2)	1-19/32	1-20/32	1-22/32	1-23/32	1-7/32	1-7/32	1-15/64	1-15/64
4	(3)	1-19/32	1-20/32	1-22/32	1-23/32	1-7/32	1-7/32	1-15/64	1-15/64
5	(1)	1-19/32	1-20/32	1-22/32	1-23/32	1-7/32	1-13/64	1-15/64	1-15/64
5	(2)	1-19/32	1-20/32	1-43/64	1-45/64	1-7/32	1-7/32	1-15/64	1-15/64
5	(3)	1-19/32	1-20/32	1-43/64	1-22/32	1-7/32	1-7/32	1-15/64	1-15/64
6	(1)	1-19/32	1-20/32	1-22/32	1-23/32	1-7/32	1-7/32	1-8/32	1-8/32
6	(2)	1-39/64	1-20/32	1-22/32	1-23/32	1-13/64	1-13/64	1-15/64	1-15/64
6	(3)	1-19/32	1-20/32	1-22/32	1-45/64	1-13/64	1-13/64	1-7/32	1-7/32

The Original Variations: Across Top and Bottom, and Down Back and Front

No. 1 shuttle varies 1/32″ across the bottom and 1/32″ across the top.
No. 2 ,, ,, 1/32″ ,, ,, ,, ,, 1/32″ ,, ,, ,,
No. 3 ,, ,, 1/32″ ,, ,, ,, ,, 1/32″ ,, ,, ,,
No. 4 ,, ,, 1/32″ ,, ,, ,, ,, 1/32″ ,, ,, ,,
No. 5 ,, ,, 1/32″ ,, ,, ,, ,, 1/32″ ,, ,, ,,
No. 6 ,, ,, 1/32″ ,, ,, ,, ,, 1/32″ ,, ,, ,,
Nos. 1, 2, 3, 4 and 6 are alike down the front; No. 5 varies 1/64″ from them.
Nos. 2, 3, 4, and 6 are alike down the back, No. 1 varies 1/32″ from them.
No. 5 varies 1/64″ from Nos. 1, 2, 3, 4 and 6, down the back.

VARIATIONS FROM THE ORIGINAL MEASUREMENTS

5 *Hours*—1*st Hour* 150° F.; 2*nd Hour* 160° *F.*; 3*rd Hour* 170° *F.*; 4*th and* 5*th* 172° *F.* *after being subjected to these times and temperatures*

Shuttle No.	Across Top		Across Bottom		Down Front		Down Back	
	1	2	1	2	1	2	1	2
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
1	+1/32	—1/64	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	+1/64
2	*Nil*	+1/32	*Nil*	*Nil*	*Nil*	*Nil*	—1/64	—1/64
3	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*
4	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	—1/64	—1/64
5	*Nil*	*Nil*	—1/64	—1/64	*Nil*	*Nil*	*Nil*	*Nil*
6	+1/64	*Nil*	*Nil*	*Nil*	—1/64	—1/64	—1/64	—1/64

Variations from the above measurements after being subjected to the following temperatures, etc.

1st hour	Wet 85°, dry 93°.	4th hour	Wet 88°, dry 94°.
2nd hour	Wet 87°, dry 94°.	5th hour	Wet 86°, dry 94°.
3rd hour	Wet 87°, dry 94°.	6th hour	Wet 88°, dry 94°.

Hour	1	2	1	2	1	2	1	2
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.
1st	*Nil*	+1/64	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	—1/64
2nd	*Nil*	*Nil*	*Nil*	+1/64	*Nil*	*Nil*	*Nil*	+1/64
3rd	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	—1/64	—1/64
4th	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*	*Nil*
5th	*Nil*	*Nil*	*Nil*	—1/64	*Nil*	*Nil*	*Nil*	*Nil*
6th	—1/64	*Nil*	*Nil*	—1/64	*Nil*	*Nil*	—1/64	—1/64

DETAILS OF VARIATIONS; AVERAGE VARIATIONS, ETC., IN 1/1000s″

From Storeroom

Description of Test	No. 1 Shuttle	No. 2 Shuttle	No. 3 Shuttle	No. 4 Shuttle	No. 5 Shuttle	No. 6 Shuttle
Average thickness of top rim	202.33	215.0	208.17	204.67	205.2	206.67
Average of the 6 shuttles=207.0						
Individual differences=224 to 199 or 25/1000s						
Average thickness of bottom rim	492.3	495.5	491.7	497.8	490.7	494.2
Average of the 6 shuttles=493.7						
Individual differences=503 to 485 or 18/1000s						

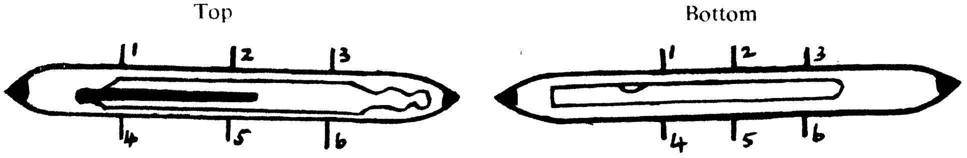
From Engine House

Description of Test	No. 1 Shuttle	No. 2 Shuttle	No. 3 Shuttle	No. 4 Shuttle	No. 5 Shuttle	No. 6 Shuttle
Average thickness of top rim	201.8	205.3	206.3	203.8	204.2	204.8
Average of the 6 shuttles=204.37						
Individual differences=210 to 200 or 10/1000s						
Average thickness of bottom rim	488.5	488.36	492.26	495.3	485.0	492.7
Average of the 6 shuttles=490.3						
Individual differences=500 to 482 or 18/1000s						

From Weaving Shed

Average thickness of top rim	199.3	205.8	204.5	204.5	202.2	204.3
Average of the 6 shuttles=203.4						
Individual differences=209 to 194 or 15/1000s						
Average thickness of bottom rim	488.8	492.6	489.0	493.7	485.8	491.7
Average of the 6 shuttles=490.17						
Individual differences=500 to 482 or 18/1000s						

SKETCHES OF SHUTTLES



Showing the positions of points measured

* * *

Acid-Resisting Metal in the Silk Industry

Notable High Silicon Iron

FOR high resistance to corrosion by acid and acid solutions, of outstanding interest for the textile industries, especially silk and wool, is a special metal made by Meldrums Ltd., of Timperley, near Manchester, England, which is not affected, for example, by sulphuric acid, nitric acid, acetic acid, chromic acid, oxalic acid, and many other acids, whether cold or at boiling point, and irrespective of the concentration. A special variety is also available which is resistant to hydrochloric acid.

Although, as with most acid-resistant and also heat-resistant metals and products, the full details are not available, it can be stated that "Meldrum" metal is a high silicon iron made by a special process. The firm have had an extensive experience in this field, dating from the last war (1914), and they have gradually perfected the metal until to-day satisfactory castings can be made up to 3 tons in weight.

The remarkable properties of silicon iron are, of course, familiar knowledge, but one of the difficulties has been to produce castings of considerable weight and size. In general, this special metal has an excellent heat conductivity and is extremely hard and durable, and much superior, therefore, to pottery and earthenware as regards withstanding changes of temperature and stresses. Further, it has the obvious advantage, as compared with any method of painting, coating, or enamelling, of being a uniform acid-resisting product right through, and therefore not affected, for example, by abrasive action, as well as changes of temperature already mentioned.

Again, the machined surfaces take a good finish by grinding so that the metal is particularly suitable for such purposes as spindles, and the ends of rollers in jiggers and other equipment for dyeing, especially with an acid bath. In the artificial silk industry, for example, cradles, pipes, and pipe racks when made of this metal can be immersed in the acid baths and left indefinitely, with no trace of corrosion. Also in a typical case a large jacketed pan made throughout of the acid-resisting metal, holding a ½-ton acid charge, has been heated for 2 hours every day for 50 weeks in the year for over 8 years, and there is not the slightest trace of iron contamination, although tests are made in this connection for every charge. Any tendency to even the slightest dulling of bright shades, whether in the silk or any other textile industry, by minute traces of iron is, therefore, eliminated by the use of this metal.

Boiler-house Efficiency

Further Hints on Fuel Economy

(*Specially Contributed*)

IF any really satisfactory progress is to be made in fuel economy, the following hints will be found very useful:—

It is essential that full records should be kept of consumption and cost if the engineering department is to be efficiently administered. Genius may afford to do without records, but ordinary ability cannot and even genius should not be trusted without them.

In order that the best results may be obtained from any boiler plant, it is necessary that the greatest care and attention should be paid to its cleanliness and to that end, the period and frequency of all cleaning operations should be based on certain definite periods of working. Unless this is done in a thoroughly systematic manner, results will be disappointing and no material improvement can be made in fuel economy.

The engineer must get every possible heat unit out of every pound of coal or oil that he burns and, to do this, it is his duty to have a constant check on combustion, the efficient use of the steam generated and the careful collection and return to the boiler of every drop of hot water he can probably retrieve. Boiler-house efficiency might be defined as being the ratio of heat usefully used to that contained in the fuel whether it be coal or oil or any other fuel.

Scale

Boiler scale has a highly insulating effect which reduces the quantity of heat transmitted through the heating surfaces of a boiler. The fuel loss by boiler scale can hardly be calculated except for special cases and with relatively little accuracy. On the other hand quite a number of tests have been made and proved by practical experience, showing the main influence which the thickness of scale has on this loss. The fuel loss for an average thickness of 1/16" scale is approx. 3.6 per cent. increasing to a fuel loss of almost 6 per cent. at an average thickness of ⅛". It will therefore always pay to keep the boiler clean and the heating surfaces free from scale.

Feed Water

The capacity of any boiler plant and its auxiliary should be such that it can be operated over the whole range of steam demand with the feed strictly equal to the rate of evaporation; this will result in the additional advantage of full heat recovery in the economizer. The practice of filling a boiler to the top of the gauge glass during the light load periods and allowing the level to fall over the peak demand is definitely wasteful. There is no doubt whatever that for maximum overall efficiency the water in the boiler should at all times be maintained at such a level that the maximum possible surface of water is exposed to the release of steam, this level being determined by the permissible minimum depth of water over the furnace crowns.

Economizer

Lancashire boilers, unless provided with heat-saving devices such as Economizers, are very wasteful on account of the high temperature at which the flue gases leave the last heating surfaces. If you have not installed Economizers, steps should be taken to do so immediately. If you have, however, done so, steps should be taken to check up that they are working properly. Check the inlet water temperatures and the outlet water temperatures from the economizer.

The type of economizer with which all steam-raising engineers are familiar is the one used in connection with Lancashire boilers. It consists essentially of vertical cast-iron tubes made up of sections of four, six, eight or ten tubes in parallel. The sections are connected at the top by plain branch pipes and at the bottom by access branch pipes, running lengthwise on opposite sides. The sections are contained in a brickwork chamber with the branch pipes outside. To keep the exterior of the tubes free from soot (the great enemy of heat transmission), scrapers, operated continuously by overhead gear on top of the brickwork chamber, move slowly up and down, and the dislodged soot falls into a pit formed by the brickwork foundations from which it can easily be removed. The scrapers on four sections of the tubes are operated by one pulley and hence the total number of sections in this type of economizer is some multiple of four. Blow-off and safety valves are fitted. Are your scrapers working properly ?

The economizer is erected in the main flue between the boiler and the chimney and a by-pass flue provided for the flue gases, so that the boiler plant need not be stopped when the economizer is out of commission for inspection or cleaning purposes. The by-pass flue is also used whenever the flow of feed water through the economizer is stopped. Failure to do this may result in the formation of steam in the economizer, and this is dangerous because this type of economizer is not designed for producing steam.

The feed water is pumped through the economizer on its way to the boiler, whilst the hot gases from the boiler pass through the economizer chamber, striking the vertical pipes at right angles and giving up the heat to them which they in turn transmit to the water by conduction. The water enters at the bottom and rises simultaneously and slowly, up all the tubes, and flows from the sections into the plain branch pipes at the top. The size of economizers required for a Lancashire boiler plant is determined principally by the amount of water evaporated per hour. To attain the highest efficiency it is advisable that the water capacity of the economizer should be equal to 1 hour's evaporation of the boiler plant.

The tubes of economizers used in connection with Lancashire boilers are mostly 9 feet long and hold about one cubic foot or 62½ lbs. of water. If the evaporation per hour is 6,000 lbs. per boiler, then by dividing 6,000 by 62½, we get the number of tubes required per boiler, and this equals 96. Another, but more approximate, method of arriving at the number of tubes required is to allow 5 tubes for each ton of coal burnt per week of 50 hours. Thus a boiler burning 25 tons of coal per week would require (25 x 5=125) 9 feet tubes, or, say, 128 tubes, this being the nearest standard size. Have you installed the economizers of adequate capacity ?

As stated above, a Lancashire boiler is a very wasteful steam producer without any economizer, but there are still unfortunately a large number of such boilers at work without such an appliance. Up to 15 per cent. saving in fuel can be shown and can be maintained by careful and methodical attention to the plant to avoid external and internal corrosion of the tubes, in leakage of air, etc. The feed water must not enter the economizer at a lower temperature than 110° F., or condensation of moisture with formation of sulphuric acid or sulphurous acid will take place causing rapid destructive corrosion of the lower ends of the pipes, especially at the cold end. The temperature of the water on the outlet end should be between 230° F and 280° F.

Feed Water Heaters

This type of appliance is designed to heat the feed water by means of exhaust steam, or in some cases, live steam. A feed water heater consists essentially of rows of tubes, through which the feed water to be heated is passed, the steam flowing outside the tubes in a suitable casing. Some heaters are fitted with tubes of special design which increase the efficiency of the heat transfer.

In cases where the quantity and pressure of the exhaust steam are not sufficient to warrant the introduction of special plant, all the exhaust steam from engines, pumps and process machines, together with condensed steam from steam traps, should be collected and led into the feed tank. Are you doing this? Precautions should be taken against contamination by oil and the feed taken should be lagged.

Lagging

In the national drive for fuel economy there is probably no single factor which is common to all industries using heat in its many and diverse applications and which can produce a greater saving in fuel, than efficient insulation.

The amount of saving in fuel by application of appropriate insulation to the proper thickness is greater than is generally appreciated.

The efficiency of insulation recommended is rarely less than 90 per cent. from steam pipe coverings which consists of about 85 per cent. magnesia and 15 per cent. asbestos fibre applied either in block form or as lagging. The following thicknesses for covering pipes are recommended—

Steam pipes, 120-160 lbs. pressure	2″
Steam pipes, 5-120 lbs. pressure	1½″
Feed pipes (all pressures).	1″ plus ½″ hard setting composition.

A single wrapping of asbestos rope can be readily applied to small pipe lines which are so often neglected. Are yours all lagged in this way? Pipe flanges and all bodies of stop valves should be lagged.

Unlagged Flanges and Valves

In lagging steam pipes it is a common practice to finish the lagging at a point 3″ or 4″ from the pipe flanges leaving the flanges uncovered. Generally this is done to make it easy to get the flanges. Two feet of unlagged 6″ steam piping carrying steam at 100 lbs. pressure will waste 5 tons of coal a year. Are your pipe flanges and steam valves lagged? How much fuel are you wasting annually in this way?

It can be shown that on a boiler plant working 24 hours a day at 160 lbs. pressure and 70 per cent. efficiency, during one year, one foot of 6″ diameter steam pipe covered with insulation of 90 per cent. efficiency will save 1,012 lbs. of fuel.

In general, great care must be taken to protect lagging from moisture and mechanical damage.

The cheapest method of protecting lagging is to wrap roof felting round it and to secure this with single strands of wire. Thus moisture is prevented from entering the lagging. There are several more expensive methods of protection which seal the lagging from the atmosphere and at the same time provide it with a more adequate protection against mechanical damage. These are usually compounds of a bituminous nature.

Slag Wool

This is a good insulant and is comparatively cheap but special care must be taken when installing it. It can be applied to hot surfaces having temperatures up to 600° C.

Magnesia

The cost of magnesia lagging is approximately the same as that of slag wool but the installation is probably easier in the case of large vessels and somewhat more difficult in the case of small pipes. It is more rigid than slag wool but should not be used on surfaces whose temperature is greater than 300° C.

Glass Wool

At temperature below about 300° C., glass wool has a greater thermal resistance than slag wool or magnesia. It is more expensive and cannot be used for temperatures greater than 500° C.

Asbestos

Asbestos is also a commonly used lagging material. There are certain types of asbestos which can only be used for lagging at relatively low temperatures (of the order of 150-200° C.). There are, however, better grades of asbestos which are of course more expensive but which can be used for higher temperatures (up to 600° C.).

Hot water from steam traps, drains and condensate is clean and scale-free and whenever practicable, should be returned to the feed tank or hot well.

Steam leakages, however small, represent a definite loss of fuel and should be attended to without delay. Check up that you have no steam leakages to-day.

Fuel Economy by Saving Electricity

Lighting.—Lamps, bulbs, and reflectors should be regularly cleaned. In the majority of mills in India, this is not done and the waste of current due to this is on average equal to 50 per cent. of the total current consumed for lighting. Is yours one of them? If so, appoint a permanent light cleaning staff to go round your mill once a fortnight. This is doubly important when electric lamps are in such short supply that they must be put to the best possible use and not wasted.

How to Get the Maximum Out of the Winding Frame

By TRILOKI NATH SHARMA

(Specially Contributed)

IT is an extraordinary fact that even after a century of the textile industry in this country, the optimum production of the weaving departments by textile mills is not achieved, with the result that production in this country is the lowest in the world, perhaps with the doubtful exception of China. It is indeed incomprehensible why one operative in the Indian textile mills is capable of looking after only five to ten automatic looms, while a Japanese operative can easily manage 25 to 60 looms. Is this deplorable and uneconomic position due to obsolete machinery, deficiency in the training of the operatives, inefficient supervision, and/or general lack of forethought on the part of leaders of the textile industry? Let us examine the position inside a typical Indian textile mill and establish the source of the present deficiency, going through the processes beginning from the winding frame and finishing with the cloth on the automatic loom.

A bobbin in the ring frame contains a relatively short length of yarn, depending on the lift and the ring diameter of the spinning frame for that length. The coarser counts have shorter lengths, and the finer counts longer lengths. Winding frames are employed to transfer the yarn from ring bobbins to the double-flanged warper bobbins. It is seldom realized that the size of the warper bobbin varies according to the count and quality of the yarn, with the result that one operative cannot look after more spindles than is usually the case in Indian textile mills to-day, and the number of knots in yarn, which is of vital importance to the weaving section, is unnecessarily and uneconomically increased. This could be easily avoided by the provision of suitable spinning and warper bobbins.

The sizes of bobbins recommended for different counts are given below.

Winding Frame

There are two types of winding frames in current use in this country for the production of grey cloth. They are: (1) Vertical spindle winding frame; and (2) side spindle winding frame. In the vertical spindle winding frame, the ring bobbins are fixed on a stationary skewer or peg, and the yarn is drawn through the top while the ring bobbin remains stationary. In the side winding frame the spindles on which the ring bobbins are fixed are placed in horizontal position. The spindle revolves and the yarn is withdrawn from the side of the bobbin. The tension on the yarn varies with the varying diameter of the bobbin from the top to the bottom, the higher tensions in this process preventing the winding spindle from attaining higher speeds. This is the reason why the speed of side spindle winding frame is about 700 to 900 r.p.m., while the speed of the spindles in the vertical winding frame is 900 to 1,100 r.p.m. The vertical winding frame is better than the side winding frame, in respect of production. It is always better to work

Sizes of Bobbins recommended for different counts.

	Size of ring bobbin				Size of warper bobbin			
Counts	Lift	Ring dia.	Bobbin dia.	Weight of yarn on bobbin	Flange	Lift	Bobbin dia.	Weight of yarn on bobbin
	Ins.	Ins.	Ins.	Ozs.	Ins.	Ins.	Ins.	Ozs.
Coarse ..	7	2	.781	1.72	4½	5	1¼	18
Medium ..	6	1¾	.684	1.29	4	4½	1⅜	12
Fine ..	5	1⅝	.635	1	3½	4	1½	6

spindles at lower speeds and have more spindles than work fewer number of spindles at higher speeds.

The spindles are placed in double rows and are driven by a tin roller of 5″ diameter. Since the front row of spindles are usually made with 1¼″ wharves and the back row with 1½″ wharves, the former rotate faster than the latter. The bobbins are half filled on the front row spindles and then transferred to slower running ones. The spindles revolve at a constant speed, while the rate of winding varies throughout. The larger the diameter of the bobbin, the greater the rate of winding. The tension on the yarn increases with the increase in the rate of winding and limits the speed of the spindles.

In order to have firmly built bobbins and to take out weaker places from the yarn, it is necessary to keep the yarn under sufficient tension. The tension depends upon the count and quality of the yarns. The coarser counts require more tension, and the finer counts less tension. It is very important to find out the exact degree of tension to suit different yarns. When too much tension is allowed, the yarn is stretched, becomes weaker and less elastic, and thus becomes unable to bear the strain in subsequent processes, especially behind the loom. It is here that good yarn is converted into bad yarn. Too little tension will not take out the weak places from the yarn, and the bobbins will be softly built. This also increases the breakages in the subsequent processes.

During the process of winding, every inch of yarn must be examined, and all weak places, bad piecings, slubs, snarls and motes taken out from the body of the yarn while retaining the elasticity. The yarn if properly looked after on this machine is conducive to higher percentage of efficiency and lower percentage of damage in the weaving shed. Unfortunately, many people do not realize the importance of attending to these vital details.

There are many types of clearers in the market, and many more have been devised by people in the line. Some clothe a wooden roller with card fillet, and the yarn is passed over the roller. The short fibres which are separated from the body of the yarn are embedded round about the passage of the yarn, and in most cases a bunch of fibre is taken away with the yarn. This cluster of fibre is further cemented with the yarn in the sizing, and breaks only when passing through the eye of the heald. Most mills in this country adhere to the very obsolete method of using an iron plate with one vertical slot to each spindle. The width of the slot is two and half times the diameter of the yarn. The yarn is passed through these slots, and it is claimed that by this method snarls, thick places, kinks, etc., are removed. But frequently short fibres cling to the sides of the slots and form a bunch which either blocks the passage of the yarn and breaks it, or is carried further along with the yarn, with the result that slubs are introduced into the yarn. The fibres are raised and the yarn becomes hairy, uneven and weaker, with the elasticity also taken away. There are many types of clearers which can be adjusted to suit the different kinds of yarn. These clearers clean the yarn without damaging elasticity. Very great care is required in selecting the most suitable type of slub clatchers and yarn clearers.

Traverse motion as applied to grey winding machines is regulated either by a heart-cam or a mangle-wheel. The traverse guide moves up and down at a uniform speed where straight bobbins are made, and in the case of barrel-shaped bobbins the traverse guide moves faster at the ends than at the centre to wind more yarn there. The straight bobbins are better, as the tension at the ends as well as at the centre remains uniform. This cannot be the case with barrel-shaped bobbins.

Just as the saying goes, "to card well is to spin well," it is equally true to say that to wind well is to weave well. It is deplorable that, while every other country in the world where the textile industry is efficiently organized is using modern high-speed automatic winders, we in this country are lagging behind and still cling to older types, which are uneconomical and do damage to yarn. It is time that Indian textile mills, particularly those which are under contemplation, must increasingly employ modern high-speed winders.

Supervision

Although the correct speed of a winding frame is a matter of expert judgment, it is a safe principle that spindles be run at slow speeds. Many a time when replacing a spindle or oiling the spindle, the operator does not care to see that the spindles are put in their own rows. This error increases the tension on the yarn. The bobbins when half filled should be transferred to the back row, for otherwise bigger bobbins in the front row will come in contact with the yarn which the back row bobbins wind round themselves. This causes extra breakages, and sometimes two ends are wrapped round one bobbin. To avoid the mixing of counts, it is necessary to mark the flanges with different colours representing different counts. Sometimes yarn at the ends is wedged between the flanges and the coils, with the result that it breaks when it is unwound in the warping creel. The winding machine should be cleaned at frequent intervals, in order to keep the passage of yarn scrupulously clean from short fibres and other impurities. Frequency of cleaning depends upon the type of yarn in use.

Mechancial knotters should always be used, and knotting by hand must be strictly avoided. The yarn may be kept under uniform tension and a tension meter may be used with advantage. The spindles should run concentrically. The relative humidity should be kept as near to the spinning room as possible. The best results are obtained by keeping humidity at 65 or 70 per cent.

Examination of Sodium Acetate

By S. M. NANAL, L.T.C.

(Specially Contributed)

ANALYTICAL books give a process of examination of sodium acetate which is rather out of reach of a mill laboratory. Hence a few simple tests are given below for the abovementioned chemical.

Whenever sodium acetate is dissolved in water the temperature of the latter falls. Sodium acetate is well ground to a fine powder. 150 gm. of condensed water are taken in a beaker. Its temperature is noted. 20 gms. of sodium acetate in fine powder are added to the above water and briskly and cautionsly stirred with a thermometer while noting the fall of temperature. In one case the fall was 8F°.

Now 20 gms. of powdered sodium acetate are exposed to warm air in a drying room till constant weight is obtained. The loss of weight which is equal to the weight of water of crystallization is 40 per cent. nearly.

Sodium acetate is used in dyeing for its property of replacing mineral acid by an organic one. Congo Red is turned blue by a mineral acid. If to a sodium acetate solution containing congo red indicator, sulphuric acid is slowly added, a point will be reached when red colour of the indicator will be turned violet. A volumetric test can be based upon the above results.

To 50 c.c. of condensed water, 1 c.c. of 1 per cent. Congo Red (Scales brand) solution is added and N/10 H_2SO_4 is run in from a burette till the red colour changes to a violet. In one case 0.2 c.c. of the acid was required. This beaker is kept as a standard for comparison of colour in subsequent titrations.

Now 13.6 gms. of sodium acetate under examination, i.e., a technical product, are dissolved in a litre of condensed water. This gives something like a N/10 solution of sodium acetate. Then 30 c.c. of condensed water are taken in a beaker to which 10 c.c. of the above sodium acetate solution are added followed by 1 c.c. of 1 per cent. Congo Red solution. Now N/10 sulphuric acid from a burette is run into the above acetate solution in the beaker till the colour of the beaker compares exactly with the standard beaker. When the colour is nearing the standard, acid should be slowly added in one or two drops and the whole stirred well before comparing with the standard. Comparison should be made by placing the beakers side by side on a white tile and looking at them from above. In one case 9.8 c.c. of N/10 H_2SO_4 were required for 10 c.c. of sodium acetate solution prepared as above. When 11 c.c. of acetate solution were taken, 10.4 c.c. N/10 H_2SO_4 were required. Whatever quantity of N/10 H_2SO_4 is required by the standard beaker (say 0.2 c.c. as above mentioned) is deducted from the titration of the acetate under test. From the above results it is visible that there is 4 per cent. error possible with the method. But better equipment and some improvement will still minimize the error. Anyhow this much accuracy is too much for technical purposes.

Modern Cotton Bale Opening and Mixing Room

Its Planning and Essential Features

BY SORAB DINSHAW, L.T.M., *Carding Assistant, Kohinoor Mills, Bombay*

(*Specially Contributed*)

IN the sketch given, two slightly different types of hopper bale openers and a Crighton opener with by-pass are shown connected in a series, followed by a pipe-line which commences at the Crighton opener, passes through to the mixing room, over the mixing stacks, then onwards to the dust filters via the exhaust fan. Two pneumatic delivery boxes (more can be installed if necessary) are shown fitted in the pipe-line above the mixing stacks. As the cotton enters the pipe-line after being opened by the preceding machines, it is drawn through the piping by means of the powerful exhaust fan into the required delivery box and deposited into the stack. Each delivery box serves any one of the two stacks on its either side, a swivel guide-plate being manipulated by hand levers in the necessary position for this purpose. The dust-laden air passes through the last box into the exhaust pipe and so to the exhaust fan and into the dust filters where impurities settle down in the bottom of the bags, and purified normal air escapes through the canvas filters back into the mixing room.

The layout described above is one of the many excellent arrangements possible for the bale opening and mixing room.

A systematic survey of the essential features of a modern, highly productive and efficient mixing room, which are also incorporated in the foregoing layout, is given below:

(1) *Automatic Feed.*— Preceding the line of the first bale opener is a creeper feed lattice which stops and starts automatically to regulate the amount of cotton passed forward into the bin. Similar automatic feed arrangement also exists to control the feed lattice of the second opener.

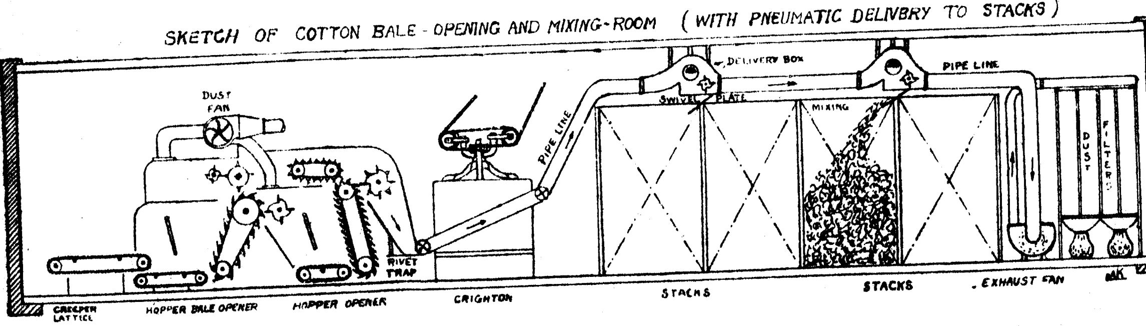
(2) *Combing rather than Beating.*— This is necessary in order to avoid damage to the longer fibre and is brought about by the spiked lattices and rollers and the introduction of leather flap beater. Spikes are finer in the second opener on account of the more opened state of cotton.

(3) *Uniformity.*— This is achieved by the parallel and equal adjustments of evener rollers and lattices.

(4) *Suitability.*— The plant must be suitable for anything from short-stapled, dirty Indian cottons to the higher varieties of American or Egyptian cottons. Hence a Crighton opener with by-pass valve is installed. Crighton is used when treating Low American or Indian cotton; otherwise it is by-passed.

(5) *Patent Rivet Trap.*— It is situated in a convenient place as shown and arrests any small solid matter such as rivets, small pieces of bale hoops, etc., which would otherwise escape forward only to damage the cages, grid-bars, etc., in the blow room or else licker-in wire or clothing in the carding engine.

(6) *Pneumatic System.*—In any present-day mixing room, the oldish crude method of conveying lattices must give place to the high-speed pneumatic method



SKETCH OF COTTON BALE-OPENING AND MIXING-ROOM (WITH PNEUMATIC DELIVBRY TO STACKS) of carrying cotton from opening machines to mixing stacks. Its principal features are: (a) *Flexibility.*—That is to say, it can be arranged in any conceivable position to suit the situation of machines and stacks. (b) *Impurity extraction.*—It is far greater on account of the exhaust fans and dust filters coming into play. (c) *Opening.*— Cotton is opened out more due to the fact that it is jostled about in its passage through pipes and the opening action of the delivery box. (d) *Ease of maintenance.*— Only attention needed is to the cage of the delivery box and the few bearings for oiling and greasing. (e) *Hygiene.*— By the pneumatic system the room is entirely freed from fluff and fly and thus it is conducive to operatives' health.

(7) *Controlled Air.*— The exhaust fans in the mixing room draw considerable air from adjacent rooms with adverse effects to the latter. Hence it is advisable to install a unit which will purify the dust-laden air from the exhaust fans and recirculate it in the room. For this purpose dust filters are provided, as shown in the sketch. In recirculating this filtered air, it loses some of its moisture which must be replenished. For this a small but effective air-conditioning unit, preferably of the water-spray type, must be installed. This will keep the atmospheric conditions of the room fairly constant and greater ease will be obtained in the subsequent processing of 'stack-conditioned' cotton from the mixing room.

The following useful data are given as a good guide:—

First opener:—	
Evener spiked roller ..	250 r.p.m.
Stripper..	500 r.p.m.
Delivery roller ..	500 r.p.m.
Dust fan	1,100 r.p.m.
Second opener:—	
Leather flap-beater ..	500 r.p.m.
Crighton opener	700 r.p.m.
Delivery box:—	
Cage	70 r.p.m.
Delivery roller ..	160 r.p.m.
Exhaust fan (for four delivery boxes).. ..	1,800 r.p.m.

Total weight of cotton delivered to stacks—1,500 to 2,000 lb./hour.

An opening and mixing plant with two openers, a Crighton, four stacks on either side, each 25 ft. × 10 ft., and exhaust fan with dust filters installed in a convenient corner, with sufficient space to store the running quantity of bales around the opening machines, will require a floor space 50 ft. long, 50 ft. wide, the height of the room being 15 ft.

Rules to Save Industrial Fuel

FUEL savings as high as 30 per cent. have resulted from adoption of a set of conservation rules by industrial plants, it was reported by Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., U.S.A. makers of control equipment.

The twelve rules developed by the company's engineers and based on experience in supplying controls to industry, included the following:—

1. Maintain the minimum permissible temperature in each section of an industrial building. For example, the office at 68 degrees, the machine room at 62, assembly room 65 and storage space 50. Remember that lower temperatures are more comfortable where manual labour is performed. 2. Maintain even temperatures in all occupied spaces and take frequent readings or recordings to be certain that these temperatures are being maintained. 3. Turn off the heat in unoccupied spaces or reduce the temperature to just above 32 degrees where freezing would cause damage. 4. Disconnect unused lines and radiation. 5. Reduce temperatures at least 10 degrees when space is not being used, such as at night. 6. Use ventilating fans only when absolutely necessary and reduce the amount of outside air taken in to a practical minimum. 7. Insulate all doors and windows and keep them closed except to maintain a minimum of ventilation required for the workers' comfort. 8. Remove anything which shields radiators, such as machines and cabinets, so that there will be no retarding of the flow of heat. 9. Have a competent heating engineer make a complete survey of the heating system and make any changes he recommends. 10. Employ a competent maintenance man to operate the heating system and make a complete survey of the system at least once a month. 11. Make every effort to obtain the co-operation of every one in the building to save fuel by keeping windows and doors closed and by reporting overheating —*American Exporter.*

On the Variation in Lint Characters Among Different Plants of the Strain Broach Desi 8*

By SRINAGABHUSHANA, B.SC., *Assistant Professor, Sri Krishnarajendra Silver Jubilee Technological Institute, Bangalore*

(*Specially Contributed*)

BROACH Desi 8 (for short B.D. 8) is an indigenous cotton, selected on the Government Farm, Broach, from among plants grown from the locally collected material, and well known in the Narmada-Mahi zone. The interesting story of its evolution is worth recording. Cotton in the Broach tract suffers considerably from the disease of wilt caused by the fungus *Fusarium vasinfectum*, which attacks the plants usually through the roots. Depending on the stage of growth of the plant at which the infection develops, the yield and quality of the lint produced are largely affected. The main task of the Broach Farm was, therefore, to evolve by selection from the local material or from hybridization a suitable type which, while resisting (or being immune to) wilt, suffered no deterioration in economic characters like yield or lint quality. Nearly a decade and a half ago, the officer in charge of the farm perceived that in a heavily infected patch of the field sown with seed from local selections, while almost all the plants had succumbed, one stood upright, unaffected by the deadly disease. It was immediately selected as a useful plant. The task of developing this was earnestly taken in hand. The yield of the plant was good. And a detailed examination of the lint revealed that it also had very desirable characters, a medium staple with good regularity, a low fibre weight per unit length with a high fibre maturity and small swollen diameter (a high intrinsic fineness). A laboratory spinning test disclosed the remarkable fact that with a mean staple of only about 0.92″, it spun to 40s—a phenomenal achievement for a tract which grows a type spinning up to 16s only. And B.D. 8 established itself. It was eagerly sought after in the wilt-affected areas.

However, before it could find favour with the cultivators all over the tract, two of its undesirable features had to be controlled. For one thing, it was a low ginner with only 32 per cent. proportion of lint, while the local yielded nearly 40 per cent. lint; and for another, its shorter staple compared with its spinning abilities came in the way of its fetching an adequate price, commensurate with its superior quality and sufficient to compensate for the low lint yield. The Broach scheme under the Indian Central Cotton Committee had, therefore, to grapple with the problem of evolving a variety which had a higher ginning percentage and a longer staple than B.D. 8, but with all its other desirable features of wilt resistance, fineness, regularity, maturity, etc. With this end in view several experiments have been in progress on the Agricultural Research Station, Broach, under the able guidance of Mr. P. L. Patel, Cotton Breeder, Broach.

One of the methods by which such improvement could be sought is by selection from B.D. 8 itself of off types which have the requisite characters, and development of the same. In this connection some preliminary work was, therefore, undertaken by the author (while in Gujarat) to survey the chances of such possibilities, as was done[1] in the case of 1027 A.L.F., the beautiful cotton grown in Surat-Navsari tract.

One hundred plants were selected on a random basis, ten each from ten rows from a compact area sown from pure selfed seed of the strain. Twelve rows were sown and to avoid border effects the first and last rows as well as the end plants in each row were rejected. Sowing was done on 30th June. By the end of January the bolls had commenced to open. On the 25th February the produce of each plant was picked and preserved separately obtaining a short pick of only such bolls as had opened in the particular week of intense ripening.

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*This work was undertaken by the writer when he was Technological Assistant, Gujarat, Surat, under the scheme financed by the Indian Central Cotton Committee, Bombay.

These 100 samples were now examined for the four characteristics, boll content (weight of seed-cotton per boll), seed weight, lint index and ginning percentage. From the results, the frequency distributions of these characteristics among the samples and the corresponding frequency constants were calculated and are given in Table I, below:

TABLE I

Frequency Distributions and Frequency Constants: Boll Content, Seed Weight, Lint Index and Ginning Percentage

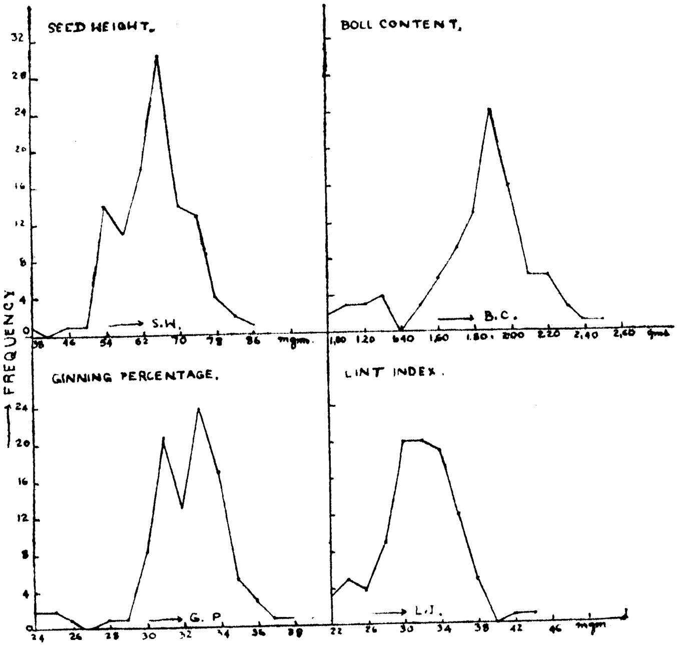
Boll content (gms.)		Seed weight (mgms.)		Lint index (mgms.)		Ginning percentage	
Mid-point of class interval	Frequency	Mid-point of class interval	Frequency	Mid-point of class interval	Frequency	Mid-point of class interval	Frequency
1.00	2	38	1	14	*1	24	2
1.10	3	42	0	..	..	25	2
1.20	3	46	1	22	3	26	1
1.30	4	50	1	24	5	27	0
1.40	0	54	4	26	4	28	1
1.50	3	58	11	28	9	29	1
1.60	6	62	18	30	20	30	8
1.70	9	66	30	32	20	31	21
1.80	13	70	14	34	19	32	13
1.90	24	74	13	36	12	33	24
2.00	16	78	4	38	5	34	17
2.10	6	82	2	40	0	35	5
2.20	6	86	1	42	1	36	3
2.30	3	..	..	44	1	37	1
2.40	1	..	..	..	..	38	1
2.50	1	..	..	..	..	..	..
Total ..	100		100		100		100

	Boll content (gms.)	Seed weight (mgms.)	Lint index (mgms.)	Ginning percentage
Mean	1.82	65.88	31.68	32.16
δ	0.308	7.488	4.128	2.428
C.V.	16.9	11.4	13.0	7.5
Range	1.00–2.47	39.0–84.1	22.1–43.2	24.0–37.7
g_1	—0.8136.S.	—0.3699.N.S.	—0.1199.N.S.	—1.119.S.
e_1	± 0.2413	± 0.2413	± 0.2425	± 0.2413
g_2	0.7062.N.S.	1.673.S.	0.5232.N.S.	2.799.S.
e_2	± 0.4783	± 0.4783	± 0.4805	± 0.4783

*Value omitted in calculating frequency constants.
δ=Standard deviation.
C.V.=Coefficient of variation.
e_1 and e_2=Standard errors of g_1 and g_2.
S.=Significant.
N.S.=Not significant.

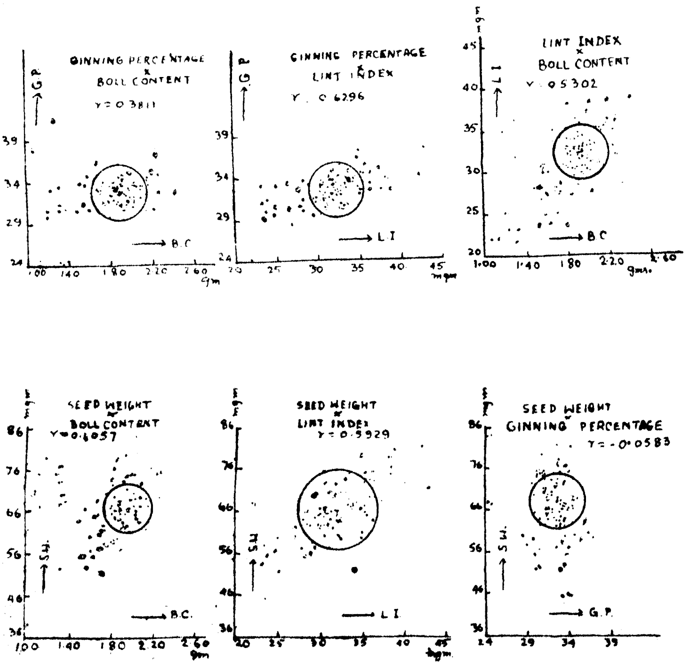
The relevant frequency polygons are also drawn in Fig. 1. The skewness was determined by calculating Fisher's g_1 and g_2 (g_1 is a measure of the asymmetry and g_2 indicates the nature of the central hump of the polygon). We observe that, for this population, the distribution is normal for lint index alone while it is negatively skew for ginning percentage and boll content and nearly so for seed weight, indicating that plants with higher boll content, ginning percentage and perhaps seed weight, are relatively greater in number. Further, ginning percentage which is a complex function of seed weight and lint index displays a skew distribution while the simple lint index is normally distributed, suggesting that the asymmetry of ginning percentage is probably due to the slightly skew distribution of seed weight. This also indicates that the development of the seed has been proportionately greater than that of the density of lint, which would account for the good fibre maturity of this type.

FIG. 1
FREQUENCY POLYGONS
(B.D.8)



In determining the fibre characters it was found necessary to reduce the number of samples. Accordingly only thirty samples were so chosen from among the hundred that the range of variation amongst these was very narrow for all the four characteristics already determined. Accordingly six scatter diagrams were drawn for all the four characters taken two by two, like seed weight and boll content, seed weight and lint index, etc. (Fig. 2). Then, by drawing a circle in the region of the maximum concentration of the dots in each of the figures and selecting those common to all the diagrams in the marked regions, the thirty samples were chosen, to discover the range of variation, the fibre characters would display among these wherein the variations in some other characters were deliberately restricted.

FIG. 2.
SCATTER DIAGRAMS
(B.D.8)



Incidentally, these diagrams also reveal the strength of association between the characters among plants of this strain. The actual coefficients of correlation—total and partial—are calculated and given in Table II, below, along with their significance.

As can be seen therefrom and from the diagrams (Fig. 2), the total correlation is fairly high between seed weight and lint index as also between ginning percentage

TABLE II

(1) b = boll content
(2) s = seed weight
(3) l = lint index
(4) g = ginning percentage

Total Correlations

$r_{bs} = 0.4057$
$r_{bl} = 0.5302$
$r_{bg} = 0.3811$
$r_{sl} = 0.5929$
$r_{sg} = -0.0583$. N.S.
$r_{lg} = 0.6296$

I. Order Partial Correlations

$r_{bs.l} = 0.1336$. N.S.
$r_{bl.g} = 0.4040$
$r_{sl.b} = 0.4873$
$r_{lg.s} = 0.8262$
$r_{bs.g} = 0.4635$
$r_{bg.s} = 0.4437$
$r_{sl.g} = 0.8119$
$r_{sg.b} = -0.2520$. N.S.
$r_{bl.s} = 0.3934$
$r_{bg.l} = 0.0718$. N.S.
$r_{lg.b} = 0.5454$
$r_{sg.l} = -0.6901$

II. Order Partial Correlations

$r_{bs.lg} = 0.2539$. N.S.
$r_{bl.sg} = 0.0531$. N.S.
$r_{sl.bg} = 0.7703$
$r_{bg.sl} = 0.2287$. N.S.
$r_{lg.bs} = 0.7907$
$r_{sg.bl} = -0.7081$

N.S. = Not significant.

and lint index. Between seed weight and ginning percentage, however, the association is very weak.

Of the twelve first order partial coefficients three indicate a rather weak association. The low negative correlation between ginning percentage and seed weight improves considerably on eliminating the effect of boll content and lint index, lower seed weight being well associated with higher ginning percentage, as might be expected.

All the three second order coefficients between boll content and seed weight, lint index, and ginning percentage, are not significant, showing that the size of the boll has no appreciable effect on the other three characters considered. However, the partial correlation coefficients $r_{bs.lg}$ and $r_{bg.sl}$ are nearly significant. Besides, the partial correlation between seed weight and lint index is as high as 0.7703, showing that heavier seeds bear relatively more lint which explains the good fibre maturity of B.D. 8. Ginning percentage and lint index are positively correlated, both being measures of available lint. But while seed weight is positively associated with lint index it is equally strongly negatively associated with ginning percentage, high seed weight thus indicating high lint index but low ginning percentage. Thus the formula for ginning percentage =

$$\frac{\textit{lint weight} \times 100}{\textit{lint weight} + \textit{seed weight}}$$

while increase in seed weight would increase both the numerator and the denominator, the ratio, however, would decrease. In other words, while heavier seeds would bear more lint, the rate of increase of seed weight would be greater than that of lint weight; which also indicates a high fibre maturity.

The samples of lint from the 30 plants selected as above were examined for the three important fibre properties, length, weight and maturity. The fibre properties were determined by the methods usually adopted at the Technological Laboratory, Matunga. Two Balls sorter tests for length, counting and weighing 2,000 fibres for weight and examining 500 fibres for maturity, were done for each sample. From the fibre length distribution values the irregularity percentage was calculated. From the values of fibre weight and maturity Standard Hair Weight was calculated according to the formula given by Peirce and Lord.[2]

The mean results, the range of values and the coefficients of variation for these 30 plants for all the properties measured are given in Table III, below.

While we observe therein that the mean length ranges from 0.89″ to 1.00″, actually 29 plants lie in a narrow range of 0.89″—0.95″ only, showing that the length range promises little variety for selection. However, it would indicate that if by chance normal plants with longer staples are found there are reasonable possibilities of developing it. Similarly in fineness, while the range is from 149 to 182 units, except for two plants with 149 units, the rest vary between 162 and 182 units only —a very narrow range. This is further emphasized by the values of standard hair weight. Here too, therefore, the variation is not distinctly far from what may be

TABLE III

No.	Property	Mean	Range	Coefficient of variation %	Remarks
1	Boll content (gms.)	1.92	1.80–2.08	4.0	
2	Seed weight (mgms.)	65.81	61.3–71.2	3.6	
3	Lint index (mgms.)	32.20	29.5–34.3	5.0	
4	Ginning percentage	32.83	31.1–34.6	3.0	
5	Fibre length (inch)	0.92	0.89–1.00	2.6	(*)
6	Irregularity percentage	8.31	6.1–11.2	13.7	
7	Fibre maturity count	74–11	65/18–82/8	..	
8	Fibre weight (10^{-6} ozs. per inch) ..	0.169	0.149–0.182	4.7	(†)
9	Standard hair weight (10^{-6} ozs. per inch) ..	0.167	0.153–0.177	3.6	

* One of 1.00″, rest between 0.89 and 0.95 inches.

† Two of 0.149″, rest between 0.162 and 0.182 units.

expected from random sampling. The distinctive character of B.D.8—a combination of the very desirable features of intrinsic fineness, low fibre weight with very good maturity (a low standard hair weight) and regularity of staple (as indicated by low irregularity percentage)—is clearly shown by these results. Their intergrated effect is manifested in its high spinning value of 40s. Its theoretical spinning value from Turner and Venkataraman's[3] formula is 33s, and by Ahmad's[4] formula 40s.

These results show that for B.D.8, the restriction of selection of plants to those with small ranges of variation in four characters (of 0.28 gms. in boll content, 9.2 mgms. in seed weight, 4.8 mgms. in lint weight per seed and 3.5 per cent. in ginning percentage) has resulted in a restriction of the variation in their fibre properties also to a small range. Hence, for this strain the lint characters appear well fixed so that the variation among different plants, selected as explained above, are not so wide as to offer a large scope for improvement by selection from within. At the same time the narrow ranges point to an interesting probability that if among plants of this strain a few with much better staple and higher ginning, beyond the limits herein found, are discovered, developing favourable types from them would be possible.

The writer is indebted to the Indian Central Cotton Committee for permission to conduct the investigation, to the Cotton Breeder, Broach, and his staff for supply of material and to Dr. Nazir Ahmad, Director, Technological Laboratory, Bombay, for useful guidance.

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1 Srinagabhushana, *Indian Textile Journal*, December 1942, page 76.

2 Peirce and Lord, *Journal of the Textile Institute*, XXX, 12, 1939, page T186.

3 Turner and Venkataraman, Indian Central Cotton Committee Technological Bulletin, B.17, page 33.

4 Ahmad-Nanjundia, Indian Central Cotton Committee "Technological Research on Cotton in India, 1924-41," page 51.

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Textile Production in Catalonia.—The cotton textile industry, centred in Catalonia, is probably the largest manufacturing industry in Spain. It is made up of several hundred plants, most of which are relatively small. There are about 1,900,000 spindles and 59,000 looms. Prior to the Spanish Civil War, consumption of raw cotton averaged between 390,000 and 400,000 bales annually. Practically all varieties of cotton textiles are produced. During the past year the industry has been much more active as a result of larger receipts of raw cotton from abroad.

Spain's woollen industry, which dates from the very earliest times, also is located principally in Catalonia and is an important factor in the economic life of the nation. There are probably around 300 weaving and spinning mills, mostly small or of medium size. Most of the raw wool used is normally produced in Spain.

Society of Dyers and Colourists Celebrates Diamond Jubilee

Speech of Dr. Henry Dreyfus

THE following are extracts from the address of Dr. Henry Dreyfus, Chairman and Managing Director of British Celanese Ltd., to the Society of Dyers and Colourists on the occasion of the celebration of the Diamond Jubilee of the Society held at Bradford on the 24th March, 1944. In 1938 Dr. Dreyfus was awarded the Perkin Gold Medal of the Society.

Everybody knows from what small beginnings the Society of Dyers and Colourists sprang. A small group of young men interested in the dyeing and finishing of textile fibres and in the manufacture of dyestuffs met sixty years ago with the object of forming a society to "watch over the progress of textile colouring abroad and promote and encourage the science of dyeing," which they considered to be "an absolute need of the times."

Since then the Society has most successfully progressed and grown up to the present time. It has radiated its wisdom and knowledge in the science and practice of dyeing and dyestuff-making, not only for the benefit of England, but for the benefit of the world at large, and for this reason has acquired a world-wide reputation.

The Society is fortunate in still having as its members two of the original founders, Mr. George Douglas and Mr. H. Grandage. It celebrated its fiftieth anniversary in 1934.

Continuing, Dr. Dreyfus observed:

"When we look back upon the early stages and consider the narrow conception which existed of dyeing and colouring and of dyestuffs manufacture in the industrial world of that time, and then consider the conception which we have of that industry to-day and of the other industries which it embraces, we see clearly the interconnection which exists between a multitude of industries and the products made by them such as dyestuffs, ranging from real to—may we call them—colourless dyestuffs—the latter, for example, in the form of finishes which are imparted to textiles, and the various effects resulting therefrom.

"In addition I may mention that whilst dyestuffs and their intermediates were previously manufactured, and in this connection an enormous amount of scientific and technical work was done over a very long period of time in order to be able to dye efficiently and with the greatest degree of fastness natural textiles such as cotton, wool, natural silk, etc., the newest trend over the last ten to twenty years has been for pure chemistry as such, as well as in its applications, to be used in order to create synthetic textiles of various kinds, whether built up from cellulose which, based on yearly growth, is virtually inexhaustible, or from coal, which itself may have originated from cellulose. The same chemistry and its applications were used in olden days for manufacturing dyestuffs. A choice was made amongst their intermediates in colourless and/or coloured form. In other words, one uses either chemicals to make dyestuffs to dye synthetic textiles, or one can use in order to make textiles some chemicals which were previously supposed only to be used for dyestuffs. May I add that the dyestuff industry has developed to such an extent that it has for some considerable time overlapped in many ways the realm of pure chemistry, including pharmaceutical and general chemistry. One knows to-day, in view of the progress of science and industry, dyestuffs which can be used for medical purposes. The same raw material may be used in the future—to mention a few examples—for transformation into a synthetic dyestuff or into rubber or into resins or into a textile. This applies in particular also to explosives, for example, T.N.T. Even the famous diazo solutions, which were the basis for one of the greatest developments in the dyeing and colouring industry and the dyestuffs industry are, when isolated, violent explosives.

"It may also be of interest to observe that since the date of the inception of the Society, and for some time previously, efforts were mainly directed towards finding the dyestuffs which were needed for dyeing the existing natural textiles. However, mainly since the last war, great efforts have been made by many people to evolve dyestuffs for the synthetic textile fibres which have been produced since that time. This was an easier task, as most of these fibres could be dyed with cotton dyes, subject to certain adjustments of quality.

"Subsequently, the development took place of the synthetic textiles which had attached to them chemical organic radicles, starting from cellulose as raw material, followed later on by synthetic textiles, starting from coal, which I mentioned before. In order that the usefulness of these products might be established as an industry, it was necessary to develop new dyestuffs of many kinds, and it so happens that all the before-synthesized textiles can in principle be dyed with dyestuffs such as have already been established for cellulose acetate silks.

"It may also be interesting to mention here that many dyestuffs have been created for many technical purposes, in view of the manifold new technical developments which have taken place in various other branches of industry. It is remarkable to notice to what degree the dyeing industry, and in particular the dyestuff-making industry, has developed, so that to-day we are able to build up scientifically dyestuffs of certain qualities for many industrial and other purposes with certain desired solubilities, fastnesses, etc., as required from case to case—just as we are in a position to-day to synthesize textiles, and impart to them most surprising qualities. For example, nobody would ever have thought that it would be possible to produce synthetically textiles three or four times as strong as natural silk, and yet this is now an everyday fact.

"Before 1884 the main raw materials for dye-making, apart from the natural dyes which existed then, were benzol, toluol, naphthalene and a few others. These products were expensive at the time, and were by-products of the gas industry. It is interesting to note that whilst these products are still derived as by-products, such large quantities are wanted to-day for such a large number of purposes, including explosives, dyestuffs and synthetic textiles, to mention only a few—that the quantities derived from the old processes are not sufficient, and have not been sufficient for some time. As the demand was created by the evolution of the activities of the various industries, new ways were found for meeting it ; for instance, petroleum or synthetic oil from coal was and is used for producing such products. In the last war, even, carbide was used to form acetylene, which in its turn was transformed into benzol and other products by many known processes. In other words, if necessity should arise the one product could be transformed into the others.

"I specially mention this because we are now in the coal and oil age. If you will cast your minds back to the period just before the steam engine was invented by Watt in our country you will remember that coal was not used to anything like the extent at that time. As a result of the invention of the steam engine, the coal industry has undergone enormous development, and the consumption of oil and coal has now increased to such an extent that people are already speaking of a shortage of oil and coal, and, to judge from the Press and scientific periodicals, some measure of anxiety seems to exist as to what may happen when oil and coal become scarce. That time is a long way off, and anyhow, I do not think we need despair for the future. Generally nature is so kind to us that if we know how to flatter her and make use of her, based on our scientific and technical evolution, the materials reappear in other forms for our use, provided we adjust ourselves to such use by taking the necessary industrial dispositions at the proper time. Suppose there were no oil, we should still have large supplies of coal. Coal is said to be in abundance, and yet it is said that coal also may be used up at a relatively early date. Suppose there were in time neither oil nor coal, we should make a virtue of necessity and produce electricity, for example, with water power, especially that derived from the tides and hence the motive power for which coal is used could, if sufficient time were allowed for the changeover, be replaced. So far as vehicles and aeroplanes are concerned, the storage of electricity would be developed and new inventions would be stimulated to satisfy the eventual requirements. In fact, electricity produced by water power would, on the principle of electrolysis of water, produce hydrogen, which itself could be used as motive power, and here again the storage of such motive power for vehicles and aeroplanes would stimulate the inventive geniuses at that time.

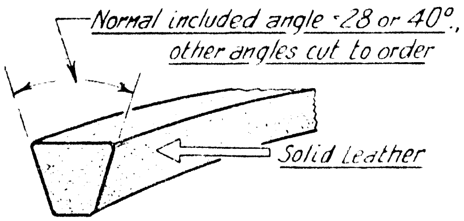
"Before the last war the dyeing and dyestuff industry was not in a happy position in this country. Many difficulties, not to say adversities, had to be met by the firms who were then occupied in this industry. The reason was that the general laws, including the Patent Law, in force in our country at that time not only did not favour but seriously hampered the development of industry at large, and in particular of your dyestuff industry. The principle of Free Trade prevailed, and the most-favoured-nation clause, with all its drawbacks, was in force. These principles had an adverse effect on this industry, inasmuch as no protection was afforded to enable its efficient development and maintenance, and to secure it from outside interference. Only when the last war broke out was the importance of the dyeing and dyestuff industry realized, in view of its close connection with many other industries, such as the explosives industry, and the chemical industry at large, which are vital in times of emergency. After the last war, the necessary steps were taken by the Government, and far more efficient and proper protection was provided for in a combination of ways.

"One of the best examples, from an objective point of view, of how a nation can develop and become the first expert in a particular industry is provided by the U.S.A., for example, in the development of the natural silk industry there. (This industry once flourished in our country but was reduced to a bare existence owing to the fact that no support was given to it by the Government of that time, probably due to Free-Trade ideas which were then the main principles of political aspirations.) Over a long period of time, and based on relatively high protection, the U.S.A. were able to establish this industry according to the principles which then existed in our country and in Europe, and they were able to improve upon it and develop it so efficiently that before the last war, and subsequently, they consumed about 80 per cent. of the whole of the existing natural silk production. The effect of this was that a large number of industries were created and developed there, and the fact of taking part in this successful development obviously imparted to the people such knowledge and science and technique and designing and fashion and style, that the U.S.A. have become first experts on natural silk textiles, including the art of weaving, dyeing, finishing and printing. This had its influence on the education and the popular taste of the masses, and particularly of the fair sex, who developed a taste for natural silk clothing—both underwear and outerwear—coupled with a sense for fashion and fashion changes and creations very close to that which existed in France, if, in fact, it did not surpass it.

"In our country, where the natural silk industry has never developed to a substantial extent owing to the difficulties mentioned before, the artificial silk industry has fortunately gradually developed to a stage where artificial silk products can be used for superior articles to replace natural silk. It has, however, been more difficult to establish it here from a time point of view than in the U.S.A., where the existence of the natural silk industry was of substantial assistance. This applied to the period after the last war and up to date, and one can now say without hestitation that most, if not all, artificial silk products can be made superior to natural silk products if they are really needed for particular purposes, in view of the adaptability of the qualities of the synthetic textiles to the various requirements."

Benson Leather V-Belts

LEATHER arranged in the form of flat continuous bands and used as the medium of transmitting mechanical power of large magnitudes from one source to another needs no introduction since this method appears to have its origin in antiquity ; leather made up into small cross circular bands has also been employed for a considerable period as a means of transmitting relatively small powers but the application of solid continuous strips of wedge-shaped or trapezoidal section leather suitable for replacing V-belts of rubber and textile fabric construction manufactured by **The Benson Vee Leather Co., Ltd., Longside Lane, Bradford, Yorks, England,** is of recent origin and represents an innovation of paramount importance to all engineers.



Belts can be supplied endless with the joint cemented or coils can be supplied for cutting to exact length on site and joining with patent fastener

As is already well known, V-belts have achieved a steadily increasing rise in popularity as a means of transmitting mechanical power with the result that this form of drive constitutes one of the principal methods of driving every conceivable type of machine ; the reasons for the increasing use of V-belt drives is due to a large extent to the fact that they possess all the advantages of flat belts with the additional ability to operate successfully on extremely short centres—an important feature where space is limited.

The type of V-belt composed of rubber and textile fabric is usually moulded endless to suit a wide range of sizes and lengths, the lengths or circumferential dimensions of the belts are, of course, limited because of the extra cost entailed in carrying large stocks of special moulds, and on this account, the user has often to design his drive to suit the maker's predetermined sizes, a procedure that might not always be a convenient one.

The claim is sometimes made that the absence of a joint is an advantage in so much that the endless belt promotes a steadier drive and ensures uniform strength throughout ; there are, however, occasions where an endless belt can be a disadvantage, particularly if it means that due to this feature, the pulleys have to be overhung or modifications made to the machine in order to facilitate the fitting of the belts without having to partially dismantle the machine.

The " Benson " V-leather belt can be supplied in any section or angle either in the form of endless belts or in rolls of 20, 50 or 100 feet long for cutting to precise lengths on site and joining by a simple yet efficient type of metallic fastener, thus every disadvantage of other types of V-belts is overcome.

" Benson " V-leathers are stocked as endless belts to suit all standard circumferences in the following sections :—$1\frac{1}{2}'' \times 1''$, $1\frac{1}{4}'' \times \frac{3}{4}''$, $\frac{7}{8}'' \times \frac{5}{8}''$, $\frac{21}{32}'' \times \frac{7}{16}''$, $\frac{1}{2}'' \times \frac{5}{16}''$ and $\frac{3}{8}'' \times \frac{7}{32}''$, and whilst the normal included angles are 28° and 40°, any special angle, section or length can be readily supplied against specification in view of the fact that the manufacture of this type of belt does not involve any moulding operations.

The makers have installed in their works special machinery for pre-stretching the belts before despatch ; this ensures that when the belts are received by the user, they are suitable for immediate installation on fixed centre drives without the need for take-up due to stretch.

When the belts are made endless at the maker's works, the joints are spliced and cemented with a special waterproof plastic capable of withstanding the effects of contact with the majority of liquids used as coolants in machine shop operations, the same type of cement or suitable

(*Continued on next page*)

"Plioflex"—A Substitute for Rubber

A PLASTIC automobile tyre that has run 8,000 miles raises the possibility that the anticipated post-war competition between natural and synthetic rubber may become a triangular battle-royal among all three.

The story of the new tyre was recently revealed by executives of the Goodyear Research Laboratory, in Akron, Ohio, U.S.A.*

The tyre just tested is the third one to be made from Plioflex, the new elastic plastic dveloped by scientists of the laboratory. The perfection of Pliofiex was first announced last year at the time of the dedication of Goodyear's new Research Laboratory in Akron. Since then a wide variety of applications of the material have been investigated of which its possible use for automobile tyres is only one. Plioflex represents an important advance and a radical departure in the field of plastics in that it is the first elastic plastic capable of being vulcanized during moulding operations. It can be handled in hot moulds exactly like natural rubber. The tyres and other objects made so far from Plioflex have been turned out with the aid of standard equipment regularly used in the making of articles from natural rubber.

The statement emphasized the fact that the tyre which ran 8,000 miles was only the third one made from the new material and that the scientists of the company are certain that they can improve greatly upon it. Whether or not the future will see a demand for plastic tyres depends upon many factors, it was stated, among them being the developments that may occur in the fields of natural and synthetic rubber. Company scientists were busily engaged in researches on synthetic rubber prior to World War II and the company is now operating its own plants and plants for the Government, but the company's thought is that every possibility ought to be investigated and the tyres of the future made out of whatever material will produce the best tyres at the lowest cost to the consumer.

The Plioflex tyre under discussion was what is known in the automobile industry as a 6.00-16 tyre of four-ply material, the sort of tyre suitable for a light car. It ran 8,000 miles in actual road tests. Scientific studies carried on during the road tests showed that the carcas and treads reached maximum temperatures only slightly higher than those reached in tyres of natural rubber and much below the temperatures developed in tyres of GR-S, as the Buna S type of synthetic rubber is now known.

While only time and further studies will determine the value of Plioflex for automobile tyres, there is ample demonstration of the usefulness of the new material in a wide variety of other applications. Tests have already demonstrated that it is superior to natural rubber in one immensely important aspect. It is not affected by the sun's rays. It is a well-known fact that natural rubber is highly sensitive to the ultra-violet radiation of the sun and for this reason the life of many rubber products is greatly shortened by exposure to the sun. This defect of natural rubber creates many problems. Thus, for example, in the construction of automobile bodies where moulded natural rubber is used for weather-stripping on the windows it has been found necessary to provide metal coverings to protect the rubber. Weather-stripping of the same type has been made successfully from Plioflex in the Goodyear Research Laboratory. Since it is resistant to sunlight, it can be used without any metal protection.

One of the most important uses foreseen for Plioflex as a result of this resistance to the sun is a new garden hose. The Goodyear Research Laboratory has produced a light-weight, flexible garden hose of Plioflex so light that any child can easily pull it around a lawn. Because the material will not crack in the sunlight, it is possible to make the hose without the inclusion of fabric which adds to the weight and awkwardness of the ordinary garden hose. In addition, the new garden hose can be made in any colour of the rainbow.

A display of Plioflex samples in the Goodyear Research Laboratory shows that the new material can be used for a great variety of automobile and electrical parts now moulded from rubber, for all sorts of hose and tubing, for the heels and soles of shoes, and for coated fabrics and papers.

It is expected that many of these fabrics will find uses in the upholstering of furniture, for luggage, raincoats, other clothing, wall coverings, draperies, book-binding, insulated wire, jar rings, etc.

The material has proved so successful for heels and soles of shoes that the company could use 100,000 pounds of it a month for this purpose if war priorities did not make it impossible to get the necessary raw materials.

Plioflex can also be made in finishes that resemble leather and one possibility is a Plioflex shoe with uppers made from the material as well as soles and heels. Such uppers would be unique, scientists of the laboratory say, in that they would require no polishing, merely wiping with a damp cloth.

As already indicated, the chief problem with regard to Plioflex at the moment is to obtain the raw materials from which it is made.

Benson Leather V-Belts

(Concluded from previous page)

fasteners can be supplied to users desirous of making their own endless belts at site.

The installation of this type of leather V-belts is an affirmative answer to the request for everyone to conserve rubber and provided their use is for work of national interest, no permit is required before they can be supplied and, further, where the belts are for use on machines for export, the necessary licence is readily granted.

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* This article is published through the courtesy of **The Goodyear Tyre and Rubber Co. (India) Ltd., 60, Chowringhee, Calcutta.**

The Indian Cotton Year, 1943

Bombay Millowners' Review

THE following are extracts from the report of the Millowners' Association, Bombay, for the year 1943:—

The I.C.C. January opened on 5th January at Rs. 415½, March Rs. 411 and May Rs. 417, March New York on 2nd January at 19.22: cross rate 4.03¾, and parity 351 points below New York. The third Indian Cotton Crop Forecast at 44,38,000 bales showed a decrease of about 19 per cent. under the previous year. Arrivals in the up-country markets were heavy, and this, with air raids over Calcutta during Christmas week, brought some nervousness in the market, and prices declined to Rs. 399 on the 7th. Transport difficulties were still there, and hence cotton could not arrive freely into Bombay. Mills were continuous buyers of all staple varieties of cotton, and prices, therefore, improved steadily to Rs. 426 on the 19th. Finally, January contract closed at Rs. 432. This contract, as it stood, was yet in an experimental stage, as for the first time it was based on the length of the staple. Total tenders during January were 22,650 bales.

February showed a still rising tendency and prices for March which were Rs. 396 on the 19th January, rose sharply reaching Rs. 510 by the end of the month.

In the first week of March, prices rose to Rs. 570 on the 4th owing to demand for cotton from mills. After a temporary decline to Rs. 542 on the 8th, the market again took a sharp upward trend, prices touching Rs. 647 on the 12th. Tenders during this month were negligible. Prices, however, began to sag, and the contract stood at Rs. 544 on the 23rd. The rise in cotton was in consonance with the general rise in prices of commodities. With a small Indian cotton crop partly owing to the "Grow-more-food" policy of Government itself, and restriction in imports of foreign cotton, with mills working day and night, a big rise in price was to be expected. Cloth and yarn prices rose four to five times the pre-war rates, and cotton only followed this rise though late. March contract closed at Rs. 556 on the 25th. The total bales tendered against this contract were 7,800. Parity with New York, where prices ranged between 19 and 20 cents, was now about par.

Prices for May went as low as Rs. 512 on the 29th, but on the very next day they rose to Rs. 544. April's first half showed fluctuations both ways, lowest touched being Rs. 515 and highest Rs. 551. After that, prices more or less steadied, ranging with narrow fluctuations round about Rs. 550. But towards the end of the month, prices rose to Rs. 608 on the 26th and remained steady with a small decline.

In the month of May, prices kept a steady tone between Rs. 575 and Rs. 600 for some days, but from the 14th, prices began to rise, May touching Rs. 660 and July Rs. 673 on the 17th. Parity again stood at 500 points above New York. This abnormal rise in such a short time with wild fluctuations daily forced Government to issue a *communique* on the 20th May, prohibiting all trading in futures. The July contract was cut at Rs. 568. Total tenders during May were 5,900 bales. Prices for ready cotton could not be maintained, and gradually began to fall in the absence of buyers. Good business had, however, been done in New Crop, N.T. Sind beginning from Rs. 740, but there were more sellers than buyers and so prices could not be maintained and a steady drop of Rs. 150 was registered in this delivery contract. Foreign cotton was also affected. Some business was done with Liverpool and U.S.A. for Sind Deshi and 4F.

On the 9th August, the U.S.A. Agricultural Bureau Report showed an estimated crop of 1,25,58,000 bales, as against 1,28,24,000 bales of the previous year. This figure was reduced to 1,14,78,000 bales later on.

Forward Market Allowed to Function

After a long interval of several months, the forward market in Bombay only was allowed to function by Government, on the 28th of October, with some safeguards imposed in consultation with the Cotton Committee of the Textile Control Board. Normal trading was allowed with a ceiling of Rs. 550 and a floor of Rs. 400. A deposit of Rs. 25 per bale was to be placed with the East India Cotton Association by each member on his net open position in weekly clearings, to check wild speculation. Options were strictly banned, and the Association was authorised to expel any one disobeying by-laws.

The market opened at Rs. 471 for January 1944 in *Divali* days, and after advancing to Rs. 480 showed a sagging tendency. Prices touched Rs. 447 on the 1st November, but steadied to some extent after that, and rose to Rs. 466 on the 6th.

Unseasonal Rains

The possibility of a big Indian crop was upset owing to late unseasonal rains which badly affected quality and quantity everywhere. The arrival in Khandesh, Berar, and other districts showed black leaf, which does not go even in process. The sagging tendency continued thereafter, and prices touched Rs. 436 on the 18th. Business was done on a very small scale, and mills were not interested in futures. The ceiling rates for cloth and yarn were being prepared and prices were to be printed on every piece of cloth that came out of the mills from 1st December. Market remained featureless more or less for most part of November, but towards the close of the month there was a rise of Rs. 20.

The month of December showed signs of much activity in ready cotton, in consequence of which forward market, which had all along been in jobbers' hands, had to follow the advancing prices of spot cotton from day to day. The prices touched Rs. 477 towards the middle of the month, but thereafter there was a reaction of Rs. 17, January contract going down to Rs. 460 on the

20th. The Indian Crop Report estimates a crop of 46,82,000 bales. Finally prices closed on 31st as under:—

January Rs. 480, March Rs. 475-12, May Rs. 477-4.

New York 19.66 March, Parity 119 points below New York; Cross rate 4.03.

Cloths and Yarns

The year saw heavy fluctuations in prices. Prices were rising in all commodity markets, and cloths and yarns could remain no exception. As prices of commodities were not controlled at the start of the crisis, it gave an opportunity to investors to step in and corner various commodities. There was already a shortage of cloths and yarns on account of heavy Government purchases and heavy exports in 1942, and this " investment buying " led to a further apparent shortage of stocks; while no sales were reported by mills at very high prices, inter-dealer business raised prices to very high levels. Besides, there sprang up both in Bombay and several large cities purely speculative purchase and sale of cloths, no deliveries being contemplated, and this resulted in very wide fluctuations in prices. With apparently small stocks and continued normal trade demand, prices were bound to rise, and outside factors mentioned above tended to accentuate the tendency towards a rise in prices. In the opinion of some experts the financial policy of Government itself contributed in some measure to a rise in commodity prices. The Anti-Hoarding Orders and Cloth Control Orders were a first step towards reduction of cloth prices. The stocks disclosed showed that there was sufficient cloth in the country to meet all reasonable requirements. The time limit for disposal of stocks manufactured before 31st July, and fixing of ceiling prices for half a dozen cloths had not much effect on retail prices, except that in October it became almost impossible for dealers to sell goods not texmarked, thus defeating the very purpose of the Anti-Hoarding Order. Since ceiling prices were fixed for only a few items, it was possible to effect sales of a large variety of cloths at prices that were decided upon by manufacturers and dealers themselves; and since no price limit was fixed for retail sales, the consumer, for whose benefit price fixation was supposed to have been decided upon, did not get any benefit. The amendment of the Control Order making it compulsory for mills to obtain from the Textile Commissioner ex-mill ceiling prices for every variety of cloth, and to stamp this and the maximum retail price (fixed at 20 per cent. over the ex-mill price) will have the effect of reducing the prices of cloths to consumers.

Rise in Prices

The rapidity of the rise in prices may be judged when it is remembered that 20s yarn, sold in the beginning of the year at Re. 1-8. changed hands at as high as Rs. 3 in May. 20/20s grey cloth, offering at Rs. 2-1 a lb. in the beginning of the year. was sold at Rs. 3-14 a lb. in May. There was nothing to justify this rise except inflation of currency, consequent " investment buying " and consequent apprehended scarcity of cloths and yarns. Intermediate fluctuations were also high, a difference of 6 to 8 annas in a few days being not uncommon both in cloths and yarns.

In January, 20/20s was quoted at Rs. 2-1 per lb. in the beginning. Prices rose to Rs. 2-3, declined to Rs. 2-0-6 and rose again to Rs. 2-7 with inter-merchant business on a considerable scale. Consumer inquiry and offtake continued fair throughout the month. First orders for Standard Cloth were placed by Government for January delivery on the basis of Panel prices for Supply Department cloths. No large sales were reported by mills during this month, but during February, sales by mills were said to have been effected on the basis of Rs. 2-2-6 to Rs. 2-3 a lb. for calendered shirtings and Rs. 3-8 a lb. for 30s/40s *dhotis*. At one time during the month leopard cloth was bought and sold as high as Rs. 3-5 a lb. During March, mills are reported to have sold 20/20s shirtings at about Rs. 2-10 a lb. and 30/40s *dhotis* at prices ranging from Rs. 4-12 to Rs. 5. Inter-merchant transactions were effected as high as Rs. 3-3-6 for 20/20s. The Finance Member's threatening speech brought these prices down to Rs. 2-10-6 but soon recovered to Rs. 2-15 a lb. During April, markets fluctuated heavily both ways ranging between Rs. 2-12 and Rs. 3-7 a lb. for 20/20s cloths. During May, mills are reported to have sold *dhotis* in 30/40s at Rs. 5 a lb., and *saris* in the same quality at Rs. 5-8 a lb. There were heavy fluctuations in the prices of leopard cloths. Prices rose to Rs. 3-8 a lb., declined to Rs. 3-3 on rumours of control, rose again with intermediate fluctuations to Rs. 3-14 and were down again to Rs. 2-12. During June and July, there was hesitancy in demand, but prices remained fairly steady round about Rs. 2-10 a lb. for 20/20s. In August, ex-mill ceiling price for 20/20s was fixed at Rs. 2-2-9 per lb., but prices in the market fluctuated between Rs. 2-3 and Rs. 2-8 from August to November. In December, ex-mill and retail ceiling prices were fixed for all sorts delivered from mills from 1st December, but their effect on prices to consumers was not felt to any extent as stocks of unpriced goods were large. The period during which non-texmarked goods could be sold ended on 31st December 1943. There were considerable stocks of these goods at the end of the year, and these have been frozen.

Yarns saw heavy ups and downs as cloth. Prices for 20s, starting from Rs. 1-8 a lb. rose to over Rs. 3 in May with wide intermediate fluctuations. In December, ceiling prices were fixed for main counts of yarns, but the coarser counts sold considerably below ceiling prices.

Offtake of cloths and yarns continued good throughout the year except during July and August when there was hesitancy and marking of time. Stocks at the end of the year were the lowest since February 1941.

The year 1943 has been more prosperous for the industry than any that has gone before. Prospects for the year 1944 are not as rosy as the actualities of the year that has just expired, as cloth and yarn prices are to be fixed every quarter on a basis that, while leaving fair margins for the mills, will not allow any runaway markets.

Preparation of Wool for Market

By SHAMJI MAL, *In "Indian Farming"*

THIS is a brief note on the method of clipping, cleaning and marketing wool. These three subjects are apparently distinct from one another but are, in fact, closely allied and interconnected: they cannot be treated, with full justice, one dissociated from the other two.

The first in the series comes clipping, as collecting and marketing necessarily follow it. It is first necessary to point out that the clipping seasons vary in different provinces and not infrequently in different districts or sections of the same province. The wool-producing areas may be classified into three divisions with reference to the number of clips they have in a year. The northern districts of the North-West Frontier Province furnish an instance of an area where sheep are clipped only once a year, during April-May. In the Punjab, the usual practice is to shear the wool twice in a year, viz., during February-March and August-September. The wool clipped during February-March is white, while that clipped during August-September is yellow.

Clipping

This process is at present being conducted rather haphazardly and all the fleece is mixed up. The old-time method of shearing with the hand shears should give place to the shearing machine. Less skill is needed to operate the machine with the same efficiency as hand shears. There is little danger of cutting unless carelessly handled.

The position in which the sheep is held while the different parts of the body are being shorn can be best learnt by watching a skilled workman at work. The proper position for shearing is to place the sheep on its rump between the knees of the shearer. The sheep's legs should be left free and the head should always be held off the floor. In this position it might be tilted either to right or left and backward or forward as the shearer may desire.

Another important point is to shear when wool is dry. Excessive moisture is injurious to wool which, when damp, soon becomes mouldy. The fibres are weakened, water stains the fleece with a brown tinge which no scouring will remove. A fleece that is removed when damp is likely, later on, to contain a large percentage of discoloured wool. Musty wool is shunned by the buyers and it can be sold only at a sacrifice.

Arrangements should be made by the Government at the clipping seasons in various centres to give demonstrations of shearing. To begin with, the wool of the head, face, neck, legs britch and belly should be clipped separately and that of other parts separately. Later on, it might be arranged to clip separately the wool of the various parts and market it accordingly.

Grading

Before dealing with collecting and marketing, it is necessary that the subject of grading wool be discussed inasmuch as this preparation for marketing affects the price it ultimately fetches.

Classification of wools in the fleece is what is technically called grading. The work of grading should be performed by wool graders, preferably at a central wool warehouse before wool is sold. Grading is done without untying the fleece. Fleeces are placed on the grading table for the grader who allocates the fleece to its proper grade. Fleeces of various grades are warehoused separately and when a sufficient quantity has accumulated they are packed for marketing.

Preparation for Marketing

The wool must be properly prepared and carefully handled for marketing to bring its face value. The market value of wool can be seriously reduced at the time of shearing by lack of preparation for market. Money spent in improving the appearance and value of the wool by trimming and clipping fleece is amply repaid.

Remove heavy dung-locks, tags, etc., before shearing. If left in the fleece these strain the wool that comes in contact with them. Clip them from the animal and pack them separately.

Fleece that contains an excessive quantity of tags, heavy dung-locks (*leida*) or other foreign substance have a soggy feeling and their price is discounted by expert buyers.

Always roll the fleece with the flesh side out, as this side presents a much brighter and far more attractive appearance than does the weather side. This is a vital point and the grower should always keep it in mind. When rolling spread the fleece with the flesh side down, fold in from the sides and ends, then roll from tail to neck. This method will bring the shoulders and sides, or the best parts of the fleece on the outside.

Tie each fleece separately. Do not roll fleeces too tightly or they will appear less desirable than they are.

Straw, chaff, sticks, burrs and other extraneous matter should be prevented from mixing with the wool.

Method of Marketing

The present method of marketing is for the producer to sell the wool in the nearest primary markets, from where it finds its way to the main markets and there it is ultimately sold to the exporters or to the manufacturers.

The members of the nomadic tribes known as Ods or the zemindars who own sheep usually take money in advance from the dealers in the markets to whom they eventually sell the wool. The dealers in the primary markets are responsible for collecting from the shearing centres and in their turn they send it to the main or central markets.

Most of the wool produced in India is exported either for sale at the periodical Liverpool auctions or to buyers in the U.S.A.

The defects of the Liverpool sales have been frequently discussed. It would be a good saving to the Indian exporter and ultimately to the producer if markets are established at an Indian port, Karachi or Bombay, where wool might be sold to foreign buyers.

Cloth Distribution on Equitable Basis

New Plan Outlined at Textile Control Board's Quarterly Meeting

A NEW scheme for distributing cloth on an equitable basis was outlined by Mr. Krishnaraj M. D. Thackersey, Chairman of the Textile Control Board, presiding over its meeting held in Bombay on the 13th October 1944; the scheme will come into operation from the 1st November, 1944. He assured the Board that despite the various handicaps in respect of coal and textile auxiliaries, the production of cloth had been maintained at the optimum possible level, but stated that there was a limited supply of finer varieties of cloth. The meeting was attended by Sir Akbar Hydari, Secretary, Department of Industries and Civil Supplies, Mr. H. M. Patel, Joint Secretary, and Mr. M. K. Vellodi, Textile Commissioner.

The Chairman informed the Board that the ceiling prices of cloth and yarn had been further scaled down. The reduction worked in the case of cloth at the rate of one anna per rupee over the prices ruling in the quarter ended August, while in the case of yarn it varied from one anna to three annas per lb., according to counts. The schedule for the fixation of ceiling prices for all types of cloth had been revised on a more rational basis, removing the various anomalies which had become apparent by the working of the current schedule and the mills had been requested to re-work the ceiling prices for all their manufactures. Those prices, after necessary checking, would be re-notified and would become operative as quickly as possible.

In connection with the supply of finer goods, Mr. Krishnaraj stated that there was a limited supply of finer varieties of cloth, the output of which totalled less than 5 per cent. of the industry's production. The demand for finer qualities had, on the other hand, increased considerably during recent years owing to the complete change in the taste of the consumers. While steps were being taken to encourage mills to produce such types of cloth as were at present in larger demand, he wanted the Board to realize that any very large improvement in that direction was not possible owing to the limited capacity of the mills to do so and the use of a very great portion of the imported cotton for making cloth for the Defence Services.

Movement of Cloth

Continuing, the Chairman said: "Although the distribution of the production of the mills has been canalised and the movement of cloth from the manufacturing centres to consuming districts has been arranged on a more rational basis, actual experience has shown that certain parts of the country have not been receiving adequate supplies of cloth commensurate with their requirements. It is proposed to introduce a distribution scheme with the object of ensuring an equitable distribution of cloth to the various surplus and deficit zones as defined under the Cotton Cloth Movement Control Order* commensurate with the population of those zones.

"The scheme envisages the allotment of a predetermined quota from the available supply of cloth for the use of each Province and State in India, based on consumption in normal years, adjusted as may be necessary according to the total quantities now available. The number of wagons to be made available for transport of cloth from the main producing centres will be regulated in such a way as to restrict the maximum quantity which it will be possible for any one area to receive to that fixed under the scheme. With the assistance and collaboration of manufacturers and leading piecegoods merchants' associations in the main producing centres, it is proposed to ensure that each area will in fact receive upto the quantity allotted to it by the use of transport permits for the movement of cloth upto the maximum stipulated extent.

Transport Permits

"Movement by rail, road or sea will not be permitted except under these transport permits. Information will be given to a co-ordinated authority in the receiving zones of all despatches, the names of the consignors, consignees and other relevant details, so that the authorities in those receiving areas will be able to keep a check on the goods and see that the consignees do properly dispose of those goods. Once having ensured the despatch of a fair share of available supplies on a predetermined basis to each zone, I consider it is the duty and responsibility of the Control authorities in that zone to see that the cloth received is properly distributed throughout the zone, marketed at not more than the wholesale prices permitted and sold to consumers at not more than the maximum retail prices permitted under the Control Order. Every encouragement will be given to the authorities in each zone to devise and develop planned schemes for distribution to ensure that cloth despatched to each zone will reach the consumer at the proper price and eradicate black markets.

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* See the *Indian Textile Journal*, November 1943, page 67.

" In developing any scheme of regional distribution it is of supreme importance for the Control authorities in the various zones to bear in mind the fact that trade should continue to remain substantially in the hands of those dealers who were engaged in it in the years 1940-42. All such 1940-42 merchants should be given a place and service to perform in the general scheme of distribution, such scheme being always arranged with the co-operation and assistance of representatives of the main piecegoods merchants' associations in the main piecegoods distributing markets.

Coal Supply Position

" The coal supply position continues to remain as before. Although there has not been any great stoppages of work due to shortage of coal during the three months under review, it should not be forgotten that this was made possible by Government switching over about 30,000 tons of coal which had been held by Bombay mills as stand-by against any contingency arising out of breakdown in supplies of fuel oil. This quantity was made available to mills and factories adjacent to Bombay, thereby affording some relief to the mills in other areas which have been able to receive coal upto the quantities allotted. The future is, however, still uncertain, but it is gratifying to see from a report recently published that the Government of India have for the time being decided not to permit any exports of coal from India. This, I hope, will go a long way in improving supplies within the country."

Sir Akbar Hydari, Secretary, Department of Industries and Civil Supplies, emphasized that the textile industry should place orders at an early date for machinery required for replacing the existing worn out equipment. He also urged the industry to increase the production of cloth, especially of finer varieties, in the interest of the civilian population in the country as well as of the industry, and hoped that progress would be made in that direction before the next meeting of the Board.

Yarn Distribution Plan

Two important announcements affecting the cotton textile industry in general and the handloom and power-loom industry in Surat in particular were made in Surat the other day by Sir Akbar Hydari, Secretary, Department of Industries and Civil Supplies, Government of India. The first was that a plan for distribution of yarn on an equitable and provincial basis had been evolved by the Department and it would be enforced within five or six weeks. The second concerned the establishment of a Handloom Textile Board to look after the interests of the handloom industry. This board would start functioning soon and the Surat handloom industry would be represented on it.

Sir Akbar Hydari was replying to an address presented to him by the Surat Weaving Association.

Replying to the demand for fixing a quota system for Provinces for the distribution of yarn, Sir Akbar announced that the demand was about to be implemented within five or six weeks, as they had been able to evolve a definite plan. Distribution would be on an equitable basis and not according to the desire or demand of the Provinces. That was in no way an empty promise. One could judge it on the results obtained. If no improvement was noticed in the distribution of yarn in Surat within a short time, then they were welcome to blame the Department.

Reason for Control

The Industries Secretary, however, pointed out that neither yarn nor cloth was in sufficient quantity in the country. If that were not the case, then there would have been no necessity for control. The

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main idea underlying control was to ensure equitable distribution of the available quantity. He thought that cotton textile control could be said to have been successful, the reason being the co-operation between the industry and the Indian public.

Mr. J. K. Thakore, the Provincial Textile Controller, would be in charge of the province-wide distribution of yarn. He made it clear that he would not be able to supply yarn to satisfy all requirements, but he could assure the gathering that the province of Bombay would get its equitable quota of yarn. He had been urged to increase the production of yarn, but it would certainly take some time.

Most of the work of the Textile Control Board was carried through private negotiation and discussion. As a result of that it was expected that there would be an increase in the quantity of yarn available for distribution.

Mr. J. K. Thakore announced that yarn meant for Surat which had been locked in Bombay for want of transport facilities would now reach Surat very shortly as the Government of Bombay had given special priority for the same. Owing to lack of transport facilities, some 75,000 bales of yarn and cloth had been accumulated in Bombay, and certain parts of India had not received goods for months.

Yarn Movement

The Textile Commissioner has decided that with immediate effect the Transport Section of the Textile Directorate will accept for movement registration applications relating to consignments proposed to be despatched by rail from Bombay City where the consignments comprise single yarn of counts 40s and below and folded yarn in cases where the constituent threads are of counts 24s and below. Movement in the case of finer qualities will only be allowed under a special permit. All applications for special permits should be made to the Provincial Textile Controller, Government of Bombay.

CONTROL NOTES AND NEWS

Cloth Distribution Hampered By Quota-holders

Fifteen months' enforcement of the various textile control measures introduced by the Government of India has not yet fully achieved the twofold objective of control, namely, to make available to the people of the country cloth in sufficient quantities and at reduced prices, and to increase the overall production of textile mills in the country. This is the view not only of the general public but also of those well informed about the textile industry and the cloth trade.

It is realized that on the Textile Control Board's recommendation, the Government have been able to curtail prices of cloth by about 40 to 50 per cent. from the 1943 peak. The vast mass of consumers, especially those in the deficit areas, are not, however, reaping the benefit of the reduced prices owing to defective distribution. The introduction of the quota system eliminated dealers who had entered the trade in the 1943 boom, but those holding quota permits are doing business just as they like.

Payment of Heavy Premiums

The majority of the quota holders are in Bombay and Ahmedabad and they seem to control the distribution to other provinces. Up-country dealers who come to the producing centres of Bombay and Ahmedabad find it impossible to get stocks from the quota holders. Only on payment of heavy premium can they get what they want. It is felt that unless this ring is broken cloth at controlled prices will not be available to the ultimate consumers.

It is also felt that steps should be taken to step up production in the mills. That there is room to expand production is proved by the fact that the mills now under Government control have been able to augment their monthly output considerably. An overall increase in production will not only help the authorities to eliminate malpractices in the trade but also provide a bigger *per capita* quota than 12 yards a year.

Railway Priority : Consumer Goods Movement

The following procedure for obtaining railway priority has been laid down and is published for general information, says a Press Note issued by the Controller-General of Civil Supplies :—

No scheduled article shall be moved from Bombay, Karachi, Calcutta or Madras without a certificate from the Controller-General of Civil Supplies, provided that no such certificate will be required when a copy of the release order from the Controller-General is produced before the Regional Controller of Railway Priorities by the dealer.

To obtain railway priority, application should be made by the consignor to the Regional Controller of Railway Priority at the despatching end and movement will be arranged by him. For instance, if goods are to be sent from Bombay to

Calcutta, the Regional Controller of Railway Priorities, Bombay, will give the necessary priority on receipt of the Controller-General's certificate referred to above.

For the movement of scheduled articles from places other than the four places mentioned above, the normal railway priority rules will apply. This new arrangement will take effect from 5th September 1944.

The scheduled articles governed by the Consumer Goods (Control of Distribution) Order, 1944, are : Wines, spirits and liquors, lead pencils, slate pencils, toilet requisites, boot and metal polishes, steel pens, fountain pens and parts of fountain pens, silk yarn and thread, artificial silk yarn and thread, pure and artificial silk fabrics, umbrellas and parts of umbrellas, enamelled ironware, kerosene oil lamps, incandescent mantles, zip-fasteners, razors and razor blades, cutlery, typewriters and parts of typewriters, typewriter ribbons, wireless receiving sets and parts of wireless receiving sets and wireless bulbs, cycles and cycle spare parts and accessories, photographic negatives and printing papers, clocks, timepieces and watches and parts thereof, cartridges, crockery, spectacle frames, sanitary fittings, sports goods, grindery and camphor.

Government Approved Cloth Shop in Poona

Poona Camp has now a Government approved cloth shop. The firm selected by Government is that of Messrs. Motichand and Premchand, Centre Street.

Mr. F. N. Rana, Additional District Magistrate, in declaring the shop open said that he had agreed to perform the ceremony chiefly because of the public service rendered by the firm at a time when profiteering in cloth was rampant in Poona. He announced a donation of Rs. 1,000 made towards the Disabled and Wounded Indian Soldiers' Fund by the proprietor of the firm, Mr. Jayantilal K. Kapadia, and said that the Collector had asked him to thank Mr. Kapadia for the gift. Mr. Kapadia said that as token of service to the public the shop would charge only 15 per cent. over the ex-mill price, although Government allowed a margin of 20 per cent.

New Textile Duty

It is notified that the customs duty under the Cotton Textiles Fund Ordinance is to be levied from 1st October.

Yarn Dealers' Returns

Under condition 2 of the yarn dealers' licence, licensees must submit to the Provincial Textile Controller, Kalachowki, Parel Road, Bombay, returns of yarn stocks by the 5th of each month in the prescribed form, a copy of which is supplied to every licensee when the licence is first issued. Besides showing stocks of yarn under each head mentioned in the form, the return should show the correct number of the licence and the month in respect of which the return is submitted. Even if no business has been transacted or the stock is *nil*, a return making a statement to that effect should be submitted. Irregular submission or non-submission of returns may involve a penalty amounting to the cancellation of the licence or non-renewal if it is due for renewal, says a Press Note from the Public Relation Officer, Rationing.

Hand Printers and Dyers

Under the Bombay Hand Printers' Licensing Order, 1944, read with the Government of Bombay, Finance Department (Supply), Notification No. 195/A of August 24, 1944, it was notified that no hand printer should print cloth and no dealer order the printing of cloth after 24th September 1944, in Bombay City, the Bombay Suburban District, the Ahmedabad Municipal Borough, the Cantonment of Ahmedabad and the revenue limits of certain villages in the City Mahal of Ahmedabad. Applications for the grant of licences under the order are being considered. Pending the passing of orders on applications received in the office of the Provincial Textile Controller, those applicants who have paid licence fees and who are already practising as printers and dyers may continue to do so, says a Press Note issued by the Provincial Textile Controller.

Control of Silk

Under the Consumer Goods (Control of Distribution) Order, all producers of pure and artificial silk fabrics, including chiffon, georgette, crepe, satin and ninon, have to furnish to the Controller-General of Civil Supplies, so as to reach him by the fifteenth day of each calendar month, detailed information of the description and quantity, actual or estimated, of these articles produced by them in the preceding calendar months, the actual or estimated cost of production and a statement as to how it is proposed to dispose of them, states the Controller General of Civil Supplies in a Press note. Those who fail to send these returns are liable to prosecution.

Hand Printers Order

On a point of interpretation of the Bombay Hand Printers Licensing Order, 1944, the Government of Bombay have replied to the Textile Processors' Association (India) as follows:—

"According to clause 1 (5) of the Hand Printers Licensing Order, 1944, printing includes 'roller printing' and such other printing as may be included by the Government. Roller printing is thus included within the scope of the Order which is intended to be made applicable to all kinds of printing other than that done by mills."

Bengal "Yarn Shortage"

The Secretary of the Calcutta Yarn Merchants' Association, Mr. H. K. Jhajharia, has issued a statement that Bengal is facing great scarcity of yarn at present, and that if immediate action is not taken by Government, famine conditions in yarn will arise. Since the quota scheme came into operation only 6,000 bales have been allotted to Bengal, compared with the normal 15,000 bales.

There is no justification for the complaints that have appeared in the Press about the exports of yarn from the mills in Madras to Bengal, states a Press Note issued by the Textile Commissioner. It says that during the five months ended August, 1944, despatches of yarn from Madras to Bengal by sea alone have averaged 8,678 bales each month. Furthermore, at the request of the Textile Commissioner to the Government of India, arrangements were made for the despatch of 2,000 bales to Bengal during September in addition to the normal exports.

Commercial and Technical Organizations

Africa and Overseas Merchants' Chamber, Bombay

Memorandum to Commerce Member.— The following are extracts from the memorandum presented by the Chamber last month to the Commerce Member to the Government of India:—

Textile Export Control

"The Export Control Scheme recently introduced allows 20 per cent. maximum margin f.o.b. over the Indian ceiling prices. This 20 per cent. consists of 7 per cent. for the mills, 3 per cent. by way of export cess and 10 per cent. f.o.b. for the exporters including all shipping and storing charges. My chamber in the memorandum that was submitted to the Hon'ble Mr. Pillai, the Commerce Secretary, during his visit here during June last desired that 15 per cent. f.o.b. would be a reasonable margin to the exporter ; in fact the members of my chamber have had to face within a short period of the operation of the scheme, a serious situation which has been jeopardizing their business to a very great extent, because in the first instance the millowners generally insist on sales through their dealers who retain 4 per cent. margin for themselves thus leaving only 6 per cent. f.o.b. for the exporters. Deducting the acknowledged expenses of 3 per cent. from this in the shape of storing, shipping and other incidental charges, there remain a bare nominal margin of 3 per cent. only for the exporter. You can realize, sir, in what a hopeless position the exporter is thus placed in these abnormal days with such a pittance when he has to undergo so many risks in the various stages of shipments and when there is a very meagre turnover. I hope you will kindly give this matter your very serious consideration and decide a reasonable margin of, say, 10 per cent. net at least for the exporters (in place of 6 per cent. with expenses which is left for the shipper as shown above at present). Besides, most of the mills in Bombay and Ahmedabad as well as in other up-country centres are reluctant to enter into direct transactions with the exporters and the result is that the orders received by the exporters from overseas markets are not adequately met. This adversely affects the export trade of India. We may also mention that we are sorry to observe that most of the mills were only too anxious to sell to the exporters at their prices just prior to the 8th of July on which date the Export Price Control Order came into force ; but immediately after the promulgation of the said order, the mills argue that there is an acute shortage of textiles in the country and consequently it is impossible for them to deal with the exporter. As long as they were in a position to dictate their prices and terms to the exporters it is a well-known fact that they made it a point to avail themselves of the overseas orders and never mentioned the internal requirements nor expressed their sudden patriotic care for the same. We understand that the Export Trade Controller has already brought to the notice of your department the seriousness of the situation resulting from the attitude of the mills. We should not like to dilate too much on this unhappy affair. However, we do appeal to you to so adjust the so-called quota system introduced by the mills that the exporters might make purchases from the mills not as a matter of indulgence but as a matter of national exigency. Otherwise, the overseas markets will be diverted to other channels and the country as a whole will be the loser.

Export Committee

"The Commerce Department having recognized this chamber as a representative body of the export trade, I, as its chairman, have been invited to serve on the Export Advisory Committee of the Export Trade Controller as well as the Export Committee of the Textile Control Board ; and I may be permitted to submit that my experience on the latter committee is not very happy as that committee predominantly consists of manufacturing and other interests who seldom appreciate the importance of export trade. I have invariably pleaded that the present level of our exports should be maintained if not increased and to that end special efforts should be made to consolidate the present markets that have come as a godsend within our sphere. I do, therefore, hope you will kindly consider this my submission as well in the interest of the exports from India.

Goodwill Delegation

"As stated above, the future of our export trade with Africa and other overseas countries, on account of racial and political hostility, is not very bright. It will be in the fitness of things if you decide to send a goodwill trade delegation consisting of both officials and unofficials in the near future in order to secure firsthand knowledge of the requirements of the countries who are likely to remain our customers after the cessation of hostilities. My chamber is prepared to be helpful in such a scheme, as it would be in the interest of not only the exporters but the Indian industry as a whole in the post-war period when Indian markets will be flooded with foreign imports. There was a time when political delegations had their uses but the world is fast changing and it is economics that hold the field. Therefore you will agree with us if we emphasize the importance of trade missions in the ensuing post-war period. The European war is drawing to a close and it is well-nigh certain that the conservative elements all the world over will want to revert to the pre-war position not only in politics but positively in economics. The trade outlets for India created by the present war are more or less a providential affair. If we make no efforts to preserve them, there is the likelihood of this good luck passing away from our hands. The markets of the Middle East as well as Africa which are at present in our economic orbit, will be a valuable asset after the war for our trade and industry. In future, India will not be able to support her teeming millions on agriculture alone. Our national industries must require kindred markets. Just as human life can only be sustained by two lungs, similarly, agriculture and industry ought to constitute the two lungs of our economic life. But India has so far made no major endeavours to foster trade relations with her neighbours. This is the most opportune and auspicious time to chalk out a programme for sending out a trade delegation to Africa and the Middle East."

Andhra Chamber of Commerce, Madras

Annual Meeting.—The following are extracts from the speech of Mr. Narayandas Girdhardas, President of the Chamber, delivered at its eleventh annual meeting last month :

" The excess profits tax and increase of income-tax and corporation tax have deprived industries not only of cent per cent of any extra profits that they might make as a result of the war but in some cases have even curtailed the standard profits which they were making before the war broke out. The policy of taxation of the Government of India is such as to enfeeble and crush the existing industries in the country, particularly those which are struggling to establish themselves. The burden on Indian industries bears no comparison with the burden placed on British industries. The conditions of the two are quite different. British industries have accumulated assets out of the huge profits in the past, whereas Indian industries have not been able to do so. British industries have built up their reserves and developed their financial strength. Indian industries have not only been unable to build up such reserves but several of them have been passing through the ordeal of just securing their financial equilibrium. It is, therefore, clear that the earning capacity and staying power of British industries are far greater than those of Indian industries.

" Therefore, British industries can bear the burden of taxation with ease while such burden of taxation will only serve to crush several industries in the country. It should be remembered, therefore, that the demand for the revision of the present policy of taxation is justifiable and it is only an expression of nothing but common sense born of anxiety to ensure India's industrial future. The British Government are keen on helping British industries, whereas their inaction and indifference where India is concerned are in striking contrast with their sympathetic attitude towards the future of British industry. The problem of modernization and re-equipment of Indian industries and their future expansion on sound financial lines has been, therefore, causing us all serious anxiety. The Chancellor of Exchequer told the British industrialists that they were entitled to know where they stand and there was, in my judgment, a very definite contribution which the taxation policy can and should make to the problems of reconstruction. He also assured them that they would take suitable measures to give industrial enterprise a fair chance to meet the challenge which the future holds for all. He also announced a special initial allowance of 20 per cent. of the cost of new plant and machinery in addition to the post-war credit of 20 per cent. of the amount of the taxation paid. Therefore, it is a fair and just demand of the Indian industrialists to the Government of India to let them know where they would stand in future and what definite assistance they could expect from the Government for the re-equipment of future development and expansion. Apart from the taxation policy, there is another factor which will seriously affect the Indian industries and weaken them. It is the import policy of the Government of India which will weaken the capacity of the industries to meet even their immediate post-war requirements.

" It is stated that not a single commodity is being imported which would seriously affect any existing Indian industry and the Government have assured the public that care was being taken to see that commodities imported were such as were not produced in this country or were produced in very small quantities. If these principles are strictly adhered to in the import of civilian goods no one has any cause for complaint. The Government refuse to give us statistics of the commodities imported and we are told that information could not be given in the interests of the public. It is common knowledge that 11.7 million yards of cloth were imported from the U.K. while cloth is actually being exported cut of India in large quantities.

" Heavy chemicals like sodium sulphate and zinc chloride have been imported as a commodity of civilian consumption while these chemicals are or could be manufactured in this country in sufficient quantities to meet the requirements of this country.

" Industries such as bobbins and shuttles have been established during the war ; without these the textile mills and jute mills would have found it extremely difficult to keep themselves continuously working. Such industries should be allowed to develop and expand by providing them with facilities for the import of machinery and spare parts or raw materials which they badly need.

Indian Chamber of Commerce, Calcutta

Quarterly Meeting.—The following are extracts from the presidential speech of Mr. B. M. Birla at the second quarterly meeting of the Chamber :—

" It is the industrial production of the United States which has changed the fortunes of war. The future safety of the Asiatic countries is dependent on the industrialization of India and China. Let those who talk disparagingly of industrialization remember that in the modern world, power goes with industrial strength." These observations were made by Mr. B. M. Birla in a comprehensive survey of India's economic and political conditions in his presidential address at the second quarterly general meeting of the Indian Chamber of Commerce, Calcutta, held on Friday, the 22nd September, 1944."

The Bombay Plan had made the Government realize it could no longer sit still and had resulted in the creation of the new Department of Planning and Development under Sir Ardeshir Dalal, an ex-President of the Indian Chamber of Commerce. Mr. Birla drew pointed attention to the fact that though a number of post-war plans had been issued recently none of them, curiously enough, dealt with industrial development. The fact was that industrialization had never ranked high in Government's list of priorities. Mr. Birla added : "Let us hope that with Sir Ardeshir Dalal as Development Member, the subject will have its due place in the official scheme of things and a vigorous policy making up for apathy and neglect in the past will be pursued. We wish him every success in the task on which he has just entered." Mr. Birla next dealt with the country's industrialization, how it has been achieved in face of difficulties and what would have been the country's fate during war had industries not been developed by Indian enterprise.

He said out of 6,000 million yards of cloth production Government took away 1,500 million yards for military requirements and exports. This reduced cloth consumption in India from 16 yards to 11 *per capita.* A country already underclothed had thus to go nearly 30 per cent. short of cloth. It was something to be thankful for that indigenous production had kept the masses clothed at least to a limited extent. And it was the result of the textile industry's effort that prices had come down by nearly 50 per cent. compared to the peak figure during the past twelve months.

Mr. Birla pointed out that whereas other countries had increased their productive capacity during the war India's industrial production had increased by hardly 10 per cent. In China and the countries of the Middle East prices had risen 50 to 100 times ; even in the U.S.A. and U.K. prices had gone up because of the scarcity of man-power and the higher purchasing capacity of the people. Emphasizing the service rendered to the country by industrialists, Mr. Birla said : "If we take these things into consideration we should be able to see the rise in prices here in its true perspective and to realize that if we had less of industrialization, the rise would have been much higher and the consumer's lot much harder than it had been."

The most urgent problem, said Mr. Birla, was to maintain employment at a high level and that would in turn cause industrialization. He wanted the State to take the initiative and not wait on events to force their hands. Expenditure on public works might not give immediate dividend but would prove a good investment in the long run. Mr. Birla was emphatic in his view that the State should have a policy positively helpful to industries. There could be no justification, he said, for any import of goods unless it helped to produce more goods or was found really essential.

Wool in Europe

ALTHOUGH Europe is a more important producer of wool than of cotton, the wool supply position of the European mainland has grown progressively worse since the summer of 1941, when Germany started her Eastern campaign. Last year civilian supplies of warm wool clothing declined to a negligible level in virtually all continental countries, says the *Manchester Guardian.* Wool in civilian clothing, indeed, has become an admixture rather than a chief constituent. Figures published last month in the Swiss *Neue Zurich Zeitung* indicate that the present sheep population of German-controlled and neutral Europe amounts to about 100,000,000 of which 6,000,000 are accounted for by Germany, 19,400,000 by France, 12,000,000 by Rumania, 26,000,000 by Spain, 9,500,000 by Italy, 11,000,000-12,000,000 by Bulgaria. As compared with the data published by the Imperial Economic Committee in 1939, there appears to be an appreciable increase in the total European figure, although the changes have varied irregularly from country to country.

The expansion—which has been supported by premium payments to sheep-farmers in Germany and the Balkans—appears to have lagged behind the German plans which aimed at an immediate increase in the European sheep population to 130,000,000. Wool production in Europe, which, according to region varies between 1 and 3.5 kilos per sheep, much of it of poor grade, at present covers less than one-third of total European requirements, estimated by the Swiss paper at 600,000 tons per annum. As, moreover, the reserve of warm clothing of civilians everywhere in Europe has fallen far below normal, there is every likelihood that Europe's import requirements of raw wool after this war will be heavy and will thus help to solve the difficult problems set by the heavy accumulations of wool stocks in the producing areas and especially in Australia and New Zealand.

OUR PERSONAL COLUMN

Mr. S. C. Mitter, Director of Industries, Bengal, has been appointed Deputy Director-General of Production and Controller of Supplies (Bengal Circle), Government of India.

Mr. S. K. Basu, of the Dhakeshwari Mills, Ltd., Dacca, has been nominated by the Central Government to be a member of the Indian Central Cotton Committee, Bombay, to represent Bengal.

On his return from leave ex-India **Mr. G. B. Constantine**, I.C.S., has been appointed Commissioner of Labour and Registrar of Trade Unions, Bombay, with effect from 6th September, *vice* Mr. Joshi, reverting.

Mr. K. R. Damle, I.C.S., District and Sessions Judge, Moradabad, has been selected as Secretary to Sir Raghunath Paranjpye, High Commissioner-designate for India in Australia.

Mr. Ram Chandra, I.C.S., Chief Controller of Imports, will officiate as the Secretary of the Commerce Department *vice* Mr. N. R. Pillai, who goes to England and America for informal trade talks.

Mr. Pillai, who was in Bombay with Sir Azizul Haque, Commerce Member, to discuss the U. K. C. C.'s activities with commercial interests, took three weeks' leave before proceeding to London.

Mr. M. S. Bhatia of the Central Engineering Service, New Delhi, has been appointed Executive Engineer, Bombay Central Public Works Division, Bombay, in place of Mr. E. M. B. Ghosh, who has been transferred to the U. P. Central Division.

Rao Bahadur N. R. Samiappa Mudaliar has been appointed as a member of the Madras Provincial Advisory Committee for Standard Cloth to represent consumers' interests *vice* Mr. T. A. Ramalingam Chettiar, resigned.

Indian Scientific Mission.—A Scientific Mission consisting of seven well-known Indian scientists left for Britain recently to establish contact with British, Dominion and American scientists. The mission will also visit the United States of America.

A Press Note says : "As announced some time ago, following on the visit to India last cold weather of Prof. A. V. Hill, Secretary, Royal Society of London, invitations to visit the United Kingdom as guests of His Majesty's Government were extended to certain well-known Indian scientists. The following are the scientists who have been able to accept the invitation :—Dr. Nazir Ahmad, Director, Technological Laboratory, Matunga, Bombay ; Col. S. L. Bhatia, Deputy Director General, Indian Medical Service ; Sir Shanti Swarup Bhatnagar, Director, Scientific and Industrial Research Directorate ; Sir Jnan Chandra Ghosh, Director, Indian Institute of Science, Bangalore and President of the National Institute of Sciences of India ; Prof. S. K. Mitra, University College of Science, Calcutta ; Prof. Meghnad Saha, University College of Science, Calcutta ; and Prof. J. N. Mukherji, Professor of Chemistry, University College of Science and Technology, Calcutta.

Members of the staff of the Technological Laboratory, Matunga, gave a tea party to Dr. Nazir Ahmad, O.B.E., Director, on the eve of his departure to the United Kingdom and America as a member of the Indian Scientific Mission. Sir Chunilal B. Mehta, Vice-President of the Indian Central Cotton Committee, and Mr. D. N. Mahta, Secretary, Indian Central Cotton Committee had responded to the invitation of the staff.

Speeches were made congratulating Dr. Nazir Ahmad on having been selected as a member of the Indian Scientific Mission and wishing him *bon voyage*. Dr. Nazir Ahmad gave a suitable reply.

Mr. M. N. Lothe, formerly Carding and Spinning Master of the Osmanshahi Mill Ltd., Nanded, Deccan; the J. K. Cotton Manufacturers Ltd., Cawnpore, U.P.; the Rajratna Narayanbhai Mills Ltd., Petlad, and recently of the D. B. Ramgopal Mills Ltd., Hyderabad (Deccan) has now joined the Ananta Mills Ltd., Ahmedabad, as a Carding and Spinning Master in charge. He will also work as a consultant to the Shree Amarsinhaji Mills Ltd., Wankaner, which is under the same management.

Obituary

Mr. B. L. Waters

The death occurred on 23rd September 1944 in Walker Hospital, Simla, of Mr. B. L. Waters, Labour Adviser to the Government of India, due to abscess in the lungs. His age was 47.

Mr. Waters, who belonged to the British Ministry of Labour and National Services, had gone to Simla from New Delhi to draw up schemes for the development of labour exchanges in India.

Mr. Bhagubhai Mafatlal

Mr. Bhagubhai Mafatlal, 35-year-old son of the late Mr. Mafatlal Gagalbhai, millonaire and business magnate, died on 30th September 1944 as a result of an accidental fall from the terrace of his building at Altamont Road, Bombay. He was one of the partners of Mafatlal Gagalbhai and Sons, Bombay, who own several cotton textile mills and factories in the province.

According to Dr. A. V. Baliga, Mr. Bhagubhai, who was his patient, was in a depressed state of mind since the death of his father, two months ago.

There was no question of unhappiness in the family, and Mr. Bhagubhai being a multi-millionaire, there could be no financial anxiety.

Tata Institute of Social Sciences, Bombay

IT is significant of the increasing importance which labour welfare is being given by research workers that it is the subject of several of the theses submitted by graduates of the Tata Institute of Social Sciences, Bombay. At the latest convocation of the Institute, the Diploma in Social Service Administration was presented to the following candidates; the theses submitted by them are also noted against their names. Mr. S. P. Joshi—" A Socio-Economic Survey of 100 Shop Assistants in the Wholesale Cloth Trade of Bombay"; Mr. P. R. Khandekar—" A Study of the Welfare Work for the Textile Workers in Empress Mills, Nagpur," and Miss Lakshmi Rangaier—" A Socio-Economic Survey of 150 Working Class Families of the Bangalore Woollen, Cotton, Silk Mills, Ltd."

Candidate for Certificate.—Miss Sophia S. Corley—" Life and Labour of Textile Women Workers in the Sassoon Mills, Bombay."

With a view to meeting the demand that is sure to be made on the Tata Institute for competent social workers in post-war years, especially in the labour field, and also expanding its curriculum, some additions were recently made to the faculty. Dr. Moorthy, one of the junior members, is specializing in labour problems so that in the near future studies in labour problems could be offered as a separate course. Labour welfare is one of the important labour problems. Though several industrial concerns are doing something in the way of promoting labour welfare in the different parts of India, and though there is an increasing interest in welfare work, no systematic study has yet been made of labour welfare on an all-India basis. In the interest of labour in general and of the Institute in particular, it was decided to undertake the organization of available data on labour welfare on an all-India scale. This, it is hoped, would serve the double purpose of supplying its own students a comprehensive knowledge of fact and techniques of welfare work carried on in different parts of our country and in different industries, and of the distinctive aspects which have developed to meet regional requirements. Secondly, it would enable it to embody the findings of this research in an authoritative book on labour welfare which, it is hoped, would be an outstanding contribution to our knowledge of labour problems. Such a work would also be of great help to all those who are engaged in post-war planning for labour.

To this end Dr. Moorthy has been sent out on an investigation tour. His tour will cover the following industrial centres:—Jamshedpur, Calcutta, Delhi, Cawnpore, Ahmedabad, Sholapur, Bangalore, Madras, Coimbatore, Cochin, Madura and Bombay. In all these places he will contact labour welfare organizers, collect firsthand information about labour welfare work and also acquaint himself with the technique of welfare work adopted in these centres.

TRADE LETTERS

(From Our Special Correspondents)

Ahmedabad

THE working of the quota system enforced by Government is being attended with difficulties. The mills, which get fixed prices, are said to be inclined to lower the quality of their products so as to earn more profit, and they force the quota-holders to accept them. The latter on their part force on the retailers and up-country merchants what they get from the mills. The Maskati and Panchkuva Markets Associations—the two wholesale organizations in Ahmedabad—have prepared, with the approval of the Textile Commissioner, a quota system on the lines of the Government quota system. Both the systems are causing difficulties which are being brought to the notice of Government for solution.

Government is revising the rates of different varieties so as to leave greater margin for those varieties which are in great demand. Mills are turning from the manufacture of finer varieties to coarser varieties as the uniform reduction of rates of all varieties has led to greater reduction in the high-priced finer varieties. Government will have now to raise the rates of finer varieties to stop the curtailment of their manufacture, as their demand all over the country cannot be met and black market trading seems to be rampant. Government should also consider the question of still further encouraging the use of Indian cotton which has suffered most during the present war and they will have to raise the rates of coarser goods manufactured out of Indian cotton.

The policy of reducing prices of cloth has reached the utmost limit beyond which it appears it cannot go without disturbing seriously the production of cloth. Government has all along been zealous in preserving the existing trade channels in its campaign against black markets. Similarly, it should equally zealously protect the existing industries. It has from the beginning enlisted the support of the textile industry in the enforcement of the Cotton Cloth and Yarn Control Order. Pursuant to this wise policy it should allow the present prices to stabilize for some time before embarking on further cuts in prices. The costs of production have not declined proportionately to the cuts in the prices of cloth, and the margin of profits of the mills is declining. They have already started manufacturing those varieties which are more remunerative irrespective of whether they are wanted by the people or not and seem to be dumping on the trade unwanted goods.

Soon there may be a clash between traders and manufacturers of cloth. Traders will refuse to accept unwanted goods and consumers will have to purchase from the black market goods which they want. The object of Government to check black marketing in cloth will be frustrated. There is demand for Indian cloth from foreign countries also. The war with Germany is being prolonged unexpectedly, and the war with Japan is still to be waged in all its grim reality. Government has been trying to control the war economy in all aspects. It has met with a fair amount of success so far. It has saved the people from starvation and nudity while preserving the existing trade channels and protecting the interests of industries. The policy of co-ordinating various conflicting interests should be pursued in such a way as to enable the country to face the ensuing peace economy boldly. Inflation has been checked, but it should not precipitate depression. Regulation has profited both trade and industry during the war. Let it profit them equally when peace comes.

Some of our industrialists are preparing for peace economy from now. They want to eliminate the middlemen altogether throughout the country by spreading the net of their own selling organization. They will open their own shops to reach the consumers direct, and compete freely with foreign goods when they are dumped after the war. The cost of distribution will be minimized to raise the efficiency of production to the highest pitch. Competition will be keenest after the war, and those mills which will be able to stand it will reach the consumer at minimum cost. Some industrialists are thinking of opening new mills on the latest designs in those centres where the cost of production is the lowest. Such a centre is Kalol—about fifteen miles from Ahmedabad. It is in Baroda State, which charges no excess profits tax or other taxes on industries. Other industries are also springing up in the Baroda State because of numerous other facilities and concessions. The flow of industries from British territory to Indian States, which started before the war, will be accelerated after the war unless the British Government gives up its stepmotherly attitude towards industries. The post-war industrial policy of the British Government will have to be more positive and protective. What the Indian States do is quite welcome, but the British Government should not lag behind Indian States who are stealing a march ahead. Indian capital, which was shy and afraid of Indian States, is increasingly seeking their protection.

Indian industrialists in their search for new ways of competing with foreign goods after the war have forgotten to retain in the country crores of rupees which they will spend after the war in replacing their old worn-out machinery by new plant. The Indian steel industry has progressed sufficiently to prepare at least some of the machinery that we need for our varied industries.

South India

THE Government Silk Weaving Factory was engaged during 1943-44 mainly in the manufacture of parachute components and a portion of the production consisted of fabrics to meet civilian requirements. About 54,000 yards of parachute silk and 17,000 yards of fabrics for civilian use were manufactured during the year, in addition to large quantities of silk thread and cord required for parachutes. The factory is expected to make a net profit of Rs. 50,000.

Sri Krishnarajendra Mills, Ltd.

The position of the Sri Krishnarajendra Mills, Mysore, has improved appreciably of recent years. It has been able to liquidate its loans and to build up reserves to the extent of Rs. 17.25 lakhs. Owing to a prolonged strike and latterly to dislocation in the supply of electric power, the production of the mills last year was only 60 per cent. of the normal output.

Cottage Industries

The development of selected cottage industries like hand-spinning and weaving, paper-making, tanning, leather-stitching, mat-weaving, pottery, button-making, smithy and brass works, engaged the attention of the Mysore Department of Industries and Commerce during the year.

Hand-spinning and weaving was carried on at Badanval, Turuvanur, Hosur, Molakalmuru and Honnali, the value of *khadi* produced at these centres being Rs. 72,600. The amount of yarn produced was 35,835 lbs. The total sales at all these centres and at the " Bhandars " at Bangalore, Mysore and Arsikere amounted to Rs. 1,31,000.

A scheme for expanding the work of the wool spinning centre at Kolar is under consideration. The scheme contemplates the training of artisans in the production of high class woollen goods and the starting of small factories.

Handloom Weaving

There were 30 yarn depots and 9 relief centres in Mysore State during the year and the question of starting 30 more yarn depots and converting all the existing yarn depots into relief centres is under consideration. The value of yarn sold to weavers at these depots was Rs. 2,76,858, as against Rs. 1,18,865 in the previous year; and finished goods of the value of Rs. 1,97,311 produced at the relief centres were sold, as against Rs. 1,10,950 in the previous year. The dye house attached to the Sri Krishnarajendra Silver Jubilee Technological Institute helped in dyeing the yarn sold at the yarn depots. In connection with the demonstrations organized with a view to increasing the output and improving the quality of handloom fabrics, 724 workmen were trained in new methods of weaving, 915 new designs were introduced, 276 looms were fitted up and repaired. Handloom goods were exempted from payment of octroi and the value of handloom goods so exempted during the year was nearly Rs. 12¼ lakhs.

War Supplies

The total value of war orders undertaken by the several industrial concerns in Mysore amounts to Rs. 11.12 crores.

Sericulture

The acreage under mulberry in Mysore State was about 75,000 at the end of June 1944. In order to prevent further unrestricted expansion of mulberry cultivation, orders have been passed prohibiting the planting of mulberry on new lands except with the permission of the Deputy Commissioners.

Twenty-five crores of Mysore seed cocoons were produced during the year, as against 20 crores in the previous year. The Government and aided granages together supplied 218 lakhs of disease-free layings. Sixteen new aided granages have been sanctioned and when they start working, the total number of aided granages will be 89. The starting of a fully equipped sericultural farm and granage at Dodballapur has been sanctioned.

Under the scheme of filature expansion undertaken last year, 899 basins out of the contemplated total of 1,460 have been erected and 734 basins are working, besides 247 old basins belonging to the Mysore Silk Filatures, Ltd., and the Mysore Spun Silk Mills, Ltd. The quantity of filature silk supplied to the Government of India for war purposes up to the middle of July 1944 was 61,250 lbs.

Some of the machinery required for the Silk Conditioning and Testing House, which is being built at Channapatna, has been received.

The cocoon markets dealt with 69 lakhs lbs. of cocoons during the year, of which 20 lakhs were purchased by filatures and 49 lakhs by *charka* reelers. In order to give greater facilities to rearers, 10 more cocoon markets have been sanctioned, bringing the total number of markets to 51.

Jog Scheme

The total outlay on the civil engineering works of the Jog Scheme during the year was Rs. 44.78 lakhs, the total expenditure incurred so far being Rs. 108.07 lakhs

Satisfactory progress is being made with the manufacture of the hydro-electrical machinery required for the scheme and some of the items have already been shipped. All the equipment for Jog and the main transformers and switch-gear for Bhadravati are expected to be received by the end of December next. Almost all the steel plates required for the manufacture of pen-stock pipes have been received and the manufacture of pipes is in progress.

The total expenditure incurred on the electrical works of the Jog Power Scheme up to the end of June 1944 was Rs. 13,94,361.

Cawnpore

Patents and Trade Marks

A COMPREHENSIVE scheme aiming at extending the protection of industrial property, namely, patents, designs and trade marks throughout India, has been devised and submitted for the consideration of the Government of India by the United Provinces Chamber of Commerce in a representation addressed to the Secretary, Commerce Department, Government of India. Pointing out the inadequacy of the present legislation in protecting industrial property in Indian States, the Chamber claims that its scheme if implemented will remove these disadvantages without disturbing the constitutional position of British India and the Native States. Explaining the scheme, the Chamber suggests setting up a central liaison office under the direct supervision and guidance of the Chamber of Princes, which will function as an apex organization co-ordinating the activities of each individual State in regard to protection of industrial property and negotiating with the central registry in British India. The liaison office will scrutinize applications for trade marks in States and forward all such applications to the central registry in British India. In the opinion of the Chamber, the Federal Court alone will be the appellate Court to decide the cases of infringement. The Chamber also suggests that the Government of India should negotiate with the Chamber of Princes as a representative body of Indian States and arrive at a collective agreement in order to implement the scheme, which is expected to help the growth of economic federation of India and development of industries by affording the necessary protection to the subjects of States for their industrial rights.

Hoarding and Profiteering Prevention

The first meeting of the Provincial Advisory Committee for Hoarding and Profiteering (Prevention) Ordinance was held under the presidentship of Sir William Ibbotson, Adviser to the Governor (Supply), when several important matters were considered. Sir William said that the Provincial Government was anxious to obtain the advice and co-operation of traders and consumers in tackling the problems created by the war situation and scarcity of commodities. There was evidence to show, he continued, that after the promulgation of the Profiteering Ordinance prices had ceased to rise and there was a tendency for prices to fall. The Committee discussed at great length whether the policy of fixing immunity price should be abandoned or not. It was ultimately agreed that the fixation of these prices was still of considerable value provided they were reviewed periodically. The trade representatives explained at length their difficulties in getting supplies and pleaded that high charges for transport, packing, etc., left them a negligible margin of profit. They complained that the Trades Associations of the Province, particularly the retailers, had not been consulted when prices were fixed by the Central Government. It was generally agreed that the question of supply was the crux of the problem and the Provincial Government's greatest concern should be to see that stocks came into the Province. The new Consumers' Goods Order has created machinery which could be used in getting stocks to up-country dealers, but as at present drafted the Order centralized all powers in the hands of the Controller General rather than in the hands of the Provincial Governments. It was strongly urged that as far as the selection of approved retail dealers under this new Order was concerned, the Provincial Government in consultation with trade associations of the Province would be the proper authority to make this selection.

Allotment of Quota to Cloth Dealers

According to a Press Note issued by the U.P. Government, it is announced that the Textile Commissioner (in consultation with the Provincial authorities) is considering the question of allotment of quota to those dealers who are entitled to quota but have been deprived of the same owing to the cancellation of the licences of those Bombay wholesalers through whom they used to deal with the mills in the basic years. All the dealers who had dealings with such Bombay wholesalers were asked to furnish the Textile Commissioner before 30th September 1944 with full particulars of the purchases made in the years 1940-41-42, through their respective District Magistrates under intimation to the Provincial Government. The names of the dealers through whom the purchases were made in the basic years together with the names of the mills of which the goods were the products should also be stated.

According to another notification, all licences of hawkers and hawker-retailers registered on or after 1st January 1944 have been cancelled with effect from 1st October 1944. Those who had registered before 1st January 1944 should surrender their present licences on or before this date when new licences on revised forms will be issued. It is further announced that " no hawker or retailer-hawker will be allowed to sell or purchase cloth or yarn on or after the 1st October 1944 unless he is in possession of the revised licence."

The total number of cases disposed of in August last under the Cotton Cloth and Yarn Control and Allied Orders in 43 districts of the United Provinces was 102; of these, 80 cases ended in conviction and 22 in acquittal. The percentage of acquittal was higher in August as compared to that in July. The highest sentence was awarded in the District of Unao where one Nand Kishore was sentenced to 8 months' rigorous imprisonment with a fine of Rs. 1,000 for selling cloth without a licence. The other substantive sentences of imprisonment were of six months' rigorous imprisonment passed in two cases in the district of Hamirpur and Fatehpur for selling cloth without a licence. Heavy sentences were also passed in the districts of Bahraich, Sultanpur, Muttra, Pratabgarh and Meerut, where substantive sentences of imprisonment were awarded along with fine.

Ten-Year Industries Plan

An ambitious plan costing about Rs. 7,50,80,000 has been prepared by Mr. L. C. Jain, I.C.S., Director of Industries and Commerce, U.P., for the post-war development of his department in 10 years. The plan is a very comprehensive one in outlook, taking as it does a broad view of the needs of existing industries in the Province and providing for the starting of several new large-scale, medium-sized and small-scale industries as well as cottage industries.

The scheme also emphasizes the need of remodelling education, especially technical education. It recommends the starting of several polytechnics in which a number of trades should be taught in the same institution. As all technical training has much in common, it is observed that a polytechnical institution is the one best fitted for the task of co-ordinated progress. The Government, it also emphasizes, should bring about contacts between industrialists and technical men, providing facilities by which the industrialists, especially small-scale producers, might easily recruit their technicians. The Government also should provide expert technical advice and new designs for the use of industry. The formation of a Central Marketing Organization as a public limited company with a capital of Rs. 10 lakhs, out of which one-fifth might be contributed by the Government and the balance by the public, is also recommended.

It stresses the need of paying special attention to developing such basic industries as heavy chemicals, re-rolling, and engineering, cement and fertilizer production, etc., some of which have already been started in a small way. At present the Province is deficient in the supply of these articles, which are needed for the cotton textile, leather, glass and paper industries and their expansion would fill a lacuna in the industrial development of the Province. The necessity of making an elaborate scientific survey of raw materials, development of transport and increased mobility of labour for industries is also stressed. And since the development of industries depends essentially upon the tariff policy of the Central Government, it would be necessary for the Provincial Government to approach the Government of India for obtaining a measure of protection to such of the industries as may have to face foreign competition.

Ten Commandments for Foremen

1. Size up each worker under your immediate direction and learn his or her characteristics and abilities.

2. Train each person under your immediate direction so that you can trust them to perform efficiently without accidents, whether or not you are present.

3. Analyze and plan each job so that before the actual work operations are undertaken you, as boss, have clearly in mind the sequence of operations, know how you want each job to be performed, and are fully aware of every hazardous situation which may occur.

4. Assign the workers to tasks based on your knowledge of their ability to perform safely. Wherever there is a special hazard, the supervisor should be certain that the worker assigned has the knowledge and skill required to do the work safely.

5. Make available all necessary tools and equipment, and make certain that they are in good condition.

6. On special jobs, consider carefully such points as shutting off power in special cases, use of extra protective devices and equipment, etc.

7. Give specific and definite instructions, and be sure that these are understood.

8. Check the work in process and in completion to make sure that directions have been properly carried out.

9. Correct or report immediately any hazardous feature discovered in general plant conditions, tools and materials.

10. Conduct yourself so that you are an example of safety to every employee on the job.—*Industrial Supervisor.*

REVIEWS

The Lancashire Textile Industry, 1944. Published by John Worrall Ltd., Oldham, England. Price: 21*s*. post free.

Paper shortage accounts for the new war-time size and binding of this well-known annual which is now in its 59th edition. This has become an approved work of reference to the cotton trade and its contents remain unchanged, while the mill information has been thoroughly revised and brought up to date. It contains full particulars of all cotton, wool, silk, and rayon spinners, manufacturers, bleachers, dyers, finishers, and other branches of the industry, fully indexed and classified. The number of spindles in Lancashire is given as 34,867,192 mule and ring, 1,826,111 doubling, and the number of looms 419,949.

India Arms for Victory. By G. W. Tyson, C.I.E., Editor of *Capital*, Calcutta. Published by Kitabistan, Allahabad. Price: Rs. 5-4-0.

The story of the mobilization of Indian industry in the cause of the war effort is one of engrossing interest but few of the books that have been written on the subject are of outstanding merit. Mr. Tyson's book, first published in 1943, is an exception. Written authoritatively and objectively, it received an excellent Press and has now gone into a second revised and enlarged edition. In this edition the story has been brought up to date. Several new chapters have been added and facts and figures revised. Man-power and Finance are among the new subjects discussed at length in this edition.

Mr. Tyson describes again how the Supply Organization has been built up over the war years until to-day it is the largest of the Government of India's civil enterprises and how the commercial manufacturing capacity of the country continues to be harnessed to the production of war stores and munitions. He devotes one chapter to the Indian cotton mill industry and brings out the vital nature of its contribution to the war effort and describes how its war activities have created new avenues of profitable employment in subsidiary trades and occupations like tailors, *mochees* (cobblers), rope-makers, supervisors, etc. The importance which the war has given to the "little man" is also duly emphasized. India's small industries have been integrated by the war and some of the advantages thus gained must survive into the peace. It may confidently be expected that the Indian craftsman will emerge from the war richer in rupees and experience.

Empire Cotton Growing Corporation, 9 Kingsmere Road, Wimbledon Common, London, England: A Review of the Work of the Experiment Stations in the Seasons 1939-40—1941-42. Price: 2*s*.

The above review gives the reader a more or less connected narrative providing a summarized description of the objects in view, the means taken to attain them and the progress made in the relevant period by the several experiment stations of the Association. A summary of information on the general conditions prevailing in relation to the industry in a particular country, highly desirable as a background to the work described, has been included in those cases where it has been provided. Since it is essential to the purpose of the review that it should be brief, much laborious work receives but brief mention or even none, and an attempt has been made to emphasize conclusive rather than inconclusive results as being more immediately interesting.

Industrial Research. By F. Russell Bichowsky, 1942. Published by Chemical Publishing Co. Inc., Brooklyn, N.Y., U.S.A. Price: $2.50.

There are now over two thousand industrial laboratories in the U.S.A. spending over a quarter billion dollars a year, and research has virtually become a sizable industry all by itself. An attempt has been made in this book to display the social importance of such research and to outline those general principles of management and organization which have proved successful in the laboratory.

NOTICES

Empire Cotton Growing Corporation: Annual Report for 1942-43.

In his review of the past year Lord Derby, as President of the Empire Cotton Growing Corporation, whose annual meeting was held in

Manchester recently, referred to the fact that the cotton crop of 1942-43 in the Colonial Empire (including the Sudan) was the smallest for many years past. This was mainly attributable to the much smaller Uganda crop.

The crops of Uganda and the Sudan are so much larger than all other Empire crops as a rule that they have a preponderant effect on the total figure. For this reason a substantial recovery was at one time looked for in the total figure for the season 1943-44, when it was known that the acreage planted in Uganda was almost equal to that of 1941, but the weather conditions were unfavourable owing to lack of rain, and the crop prospects deteriorated considerably in consequence as the season advanced.

Considerable attention was being devoted to the development of activities after the war, and in this connection Lord Derby gave prominence to the assistance received from the Scientific Advisory Committee. The most important part of their work continued to be concerned with the arrangements for establishing the new Central Cotton Research Station which the Corporation had decided to place in Uganda.

Within the last few years the Imperial Government have given considerable attention to the need for research work of many kinds in the Colonial Empire; in this connection particular interest is attached to the Report of the Colonial Research Committee, which emphasizes the difficulty of pursuing research work of the high standard necessary so long as present conditions are allowed to persist; they point out that scientists in the Colonies have frequently to work in isolation and with relatively inferior equipment; that many of them have to combine with routine investigations such research work as they can find time to do, and that there is a tendency for research problems to be dictated too exclusively by local and temporary interests without due regard to scientific possibilities. For many years the Corporation have repeatedly called attention to these obstacles to effective, high-class research work in the Colonies.

Mysore Commerce (Organ of the Mysore Chamber of Commerce, Bangalore), Vol. I, No. 1. Annual Subscription: Rs. 12-0-0.

The Mysore Chamber of Commerce was publishing until recently a "Weekly Market Report and Bulletin," which satisfied the business man's need to a large extent. But market reports only reflect the sum total of the prevailing economic, political and social conditions, and they do not help the commercial man to understand the complex forces which lie behind market movements. This deficiency is made good by the fortnightly journal which has now superseded the *Market Report* of the Mysore Chamber. The journal is intended to serve the industrial and commercial community in particular and the public of Mysore State in general. In the era of planning that is ahead, we are informed, *Mysore Commerce* will strive to promote understanding between the public and the Administration of the State.

Federal India and Indian States (All-India Industries Supplement). Edited by Mr. H. Srikantia, Visvesvarapuram Circle, Bangalore City. Price: Re. 1-0-0.

The object of the Supplement under notice is to focus public attention on the various problems of planning and development which would arise when the war ends. The editor hopes to make this supplement a half-yearly production. It contains messages of goodwill from several prominent personalities connected especially with Mysore and is profusely illustrated. We have no doubt succeeding numbers of the supplement will amply fulfil the promise held out by this first number.

The Andhra Chamber of Commerce, Madras: Annual Report, 1943. The Andhra Chamber of Commerce in Madras has been growing more and more influential and, with an increase in the volume of work to be done, they had to appoint a whole-time paid assistant secretary. They also received the gift of a library of 1,000 commercial and allied books from their President, Mr. Narayandas Girdhardas.

We have received from the **Indian Central Cotton Committee Technological Laboratory** copies of spinning test reports on carded and combed samples of the following cottons:—

Surat 1027 *A.L.F.* and *A.R. Kampala, Bailhongal Jayawant* and *A.R. Kampala, Hubli Jayawant* 1941-44, *Bagalkote Jayawant* 1943-44, *Miraj* 1935-44, *Westerns* 1943-44, *Viramgam* 1943-44, *Sind M.*4 (saw-ginned) and *A.R. Kampala, Bailhongal* 1935-44, *Broach B.D.* 8 1943-44, 289*F* (saw-ginned) and *A.R. Kampala, Surat* 1941-44, *Bijapur* 1933-44, *Punjab-American* 4*F* 1929-44, *P.A.* 4*F* (*Bahawalpur*) 1943-44, *Verum* 1940-44, and C.P. No. 1 (1935-44), as well as technological report on *Umri Bani* 1943-44.

J. K. Review, Vol. 4, No. 12, includes an interesting article on labour officers by Mr. R. G. Gokhale of the Millowners' Association, which is well worth reading.

Photoelectric Tristimulus Colorimetry with Three Filters. Published by the U.S. Department of Commerce, National Bureau of Standards, New York, U.S.A.

The photoelectric cell is finding ever-widening use in scientific apparatus. The above publication describes the development and use of an "artificial eye for colour measurement," which consists of a barrier-layer photocell and three selected spectral filters. The distinguishing feature of a photoelectric tristimulus colorimeter is the approximate spectral equivalence of the filter-photocell combinations of the apparatus and the tristimulus specifications of the spectrum which characterize the colour vision of the average normal observer. Because of this approximate equivalence, the new apparatus will respond to colour differences in much the same manner as the normal human eye. Excepting cases in which the present lack of ideal spectral equivalence introduces errors which cannot be tolerated, the photoelectric tristimulus colorimeter described herein can be used to measure both the size and the character of colour differences. The potential speed and relative simplicity of the apparatus suggest its use in quantitative studies of colour tolerance. Whenever suitable colour standards are available, the same advantages recommend the use of the apparatus for tests of materials for compliance with colour specifications.

Indian Mill Finance

Working of Textile Companies

Kothari Textiles, Ltd., Singanallur

(Agents : Kothari & Sons, Madras)

The result of the company's working for the year ended 30th June 1944, after allowing depreciation of Rs. 1,00,000, is a profit of Rs. 18,39,251-4-4, to which is added the amount brought forward from last year's account of Rs. 37,035-12-5. From this is deducted the amount appropriated for provision for taxes of Rs. 15,91,337-3 and the amount appropriated for reserve fund of Rs. 1,49,750, leaving a balance of Rs. 1,35,199-13-9.

The Directors recommend appropriating the same in the following manner :—To pay a dividend at 6 per cent. per annum (free of tax) on the preference shares for the year ended 30th June, 1944, amounting to Rs. 18,000 ; to pay a dividend at Re. 1-8 (free of tax) per share on the ordinary shares for the year ended 30th June 1944, amounting to Rs. 75,000 leaving a balance of Rs. 42,199-13-9 which they recommend carrying forward to the next year.

The company's relationship with labour was satisfactory. Under the recommendations of the Southern India Millowners' Association, dear food allowance was increased to 110 per cent. in proportion to the rise in the index number of foodstuffs.

Berar Manufacturing Co., Ltd., Badnera

(Agents : Kasturchand Dadabhoy & Co., Bombay)

The directors state that during the year ending 30th June 1944 the company has made a net profit of Rs. 15,69,443-1-8. Adding to this the amount of Rs. 6,653-8-5 brought forward from last year there remains a credit balance of Rs. 15,76,096-10-1 which they propose to appropriate as under :—Provision for taxation Rs. 11,96,000 ; provision for compulsory deposit under E. P. T. Ordinance No. XVI of 1943 Rs. 3,29,000 ; payment of dividend at the rate of Rs. 15 per share free of income-tax Rs. 41,250 ; balance to be carried forward to next year's account Rs. 9,846-10-1.

As the mills had made substantial profits the management decided to pay for the year under report also a war bonus under certain conditions to all employees who were on rolls during the year at the rate of one-fourth of their total earnings for the period of 1st July 1943 to 30th June 1944.

The mill and dye house premises and all other buildings, machinery and stock-in-trade and all other property belonging to the company have been fully insured against fire, war and riot and civil commotion risks. The profit and standing charges have also been insured against fire and civil commotion risks.

Binod Mills Co., Ltd., Ujjain (including The Deepchand Mills)

(Agents : Binodiram Balchand)

The working of the company for the year ended 31st December, 1943, shows a profit of Rs. 64,29,979-11, to which is added a sum of Rs. 2,17,511-4-4 brought forward from last year's account making the total profit of Rs. 66,47,490-15-4. From this amount a sum of Rs. 10,21,742-7 as agents' remuneration and commission on sales is to be deducted, as also depreciation on fixed assets and provision for taxation on profits is to be made.

This result has been achieved in spite of labour trouble and a very acute shortage of coal. There was also an acute water shortage on account of which the dyeing and the bleaching departments remained partially closed for many days.

Nearly 25 per cent. of their looms are working on Government war orders and 30 per cent. on standard cloth.

In view of good profits made by the company a payment of three months' wages or 25 per cent. of the annual basic earnings was made to all the workpeople and the staff by way of bonus which amounted to Rs. 2,42,882-15-3.

One sterilizer and sprinklers in absorbent cotton department and loom shed have been purchased and added to the mills in the year under report :—

The directors recommend that the net profit of Rs. 56,25,748-8-4 be disposed of as under :—Dividend proposed to be paid for the year ending 31st December, 1943 at Rs. 111 per share Rs. 22,20,000 ; depreciation for building Rs. 4,00,000 ; machinery Rs. 6,00,000 ; furniture Rs. 10,000 ; Deepchand Mills building Rs. 1,08,000 ; Deepchand Mills machinery Rs. 2,00,000 ; Binod Ginning Factory Rs. 10,000 ; Binod electric installation Rs. 20,000 ; Deepchand electric installation Rs. 8,000 ; Motor cars and lorries Rs. 18,000 ; and dead and live stock Rs. 5,000 ; provision for taxes Rs. 2,00,000 ; dividend equalization fund Rs. 2,50,000 ; reserve fund Rs. 10,54,677-8; anti-gas department Rs. 35,000 ; reserve for bad and doubtful debts Rs. 50,000 ; provision for workpeople's building fund Rs. 2,75,000 and to carry forward Rs. 1,62,071-0-4.

The mills building and machinery together with cotton, yarn, cloth, stores and waste, etc., for both the mills are at present insured against fire for Rs. 1,59,44,500 and against profit and outstanding charges for Rs. 20,00,000.

Khatau Makanji Spinning and Weaving Co., Ltd., Bombay

(Agents : Khatau Makanji & Co.)

The account for the year ended 30th June 1944 shows a profit of Rs. 1,25,03,030-13-8 to which is to be added the carry forward balance from last account of Rs. 26,418-5-5 which makes available the total of Rs. 1,25,29,449-3-1. From this amount an interim dividend of Rs. 10 free of income-tax per ordinary share was paid during the year absorbing Rs. 2,99,250, leaving a balance of Rs. 1,22,30,199-3-1. The directors have made allocations from this amount as under :—To building depreciation Rs. 83,000 ; to machinery depreciation Rs. 2,57,500 ; to provision for taxation account Rs. 1,15,00,000 (including deposit) Rs. 1,18,40,500, leaving a balance of Rs. 3,89,699-3-1 to the credit of profit and loss account. The amount is to be distributed as under :—Dividend on preference shares at

Rs. 6 free of income-tax per share for the current year Rs. 60,000 ; dividend on ordinary shares at Rs. 10 free of income-tax per share for the current year Rs. 2,99,250 leaving a balance of Rs. 30,449-3-1 to be carried forward to the next year.

During the year under report orders were placed for new machinery of the approximate total value of Rs. 3,07,789.

The mill buildings, machinery (boilers excepted) and stock-in-trade at Bombay and up-country have been insured against fire, riot, and civil commotion risks for Rs. 3,62,76,298 and profit and fixed charges are insured at the sum of Rs. 55,00,000 against like risks for a period of 24 months. The company's stock including buildings and machinery have also been insured under the Government of India War Risks Insurance Ordinance.

Sri Krishnarajendra Mills, Ltd., Mysore

(Chairman : M. S. Ramachandra Rao)

The company's working for the year ended 30th June 1944 has resulted in a profit of Rs. 16,53,397-13-11. This is the result for an effective working period of only about 6½ months, the remaining 5½ months having been lost partly on account of a labour strike and partly owing to the serious breakdown in electric power supply.

From the above profits have been charged for depreciation on fixed assets for the year ended 30-6-1944 Rs. 2,01,380-13-7 and for provision for income-tax and super-tax Rs. 5,60,000.

This leaves a sum of Rs. 8,92,017-0-4 which with the carry-forward of Rs. 12,020-10-8 from last year amounts to Rs. 9,04,037-11-0. There is also a sum of Rs. 5,783-5-4 transferred from the reserve for bad and doubtful debts to general reserve, representing sums recovered against bad and doubtful debts. Of this total sum of Rs. 9,09,821-0-4, the directors have made the following appropriations :—General reserve Rs. 2,06,000 ; dividend equalisation fund Rs. 1,00,000 ; raw materials fluctuation reserve Rs. 75,000 ; reserve for heavy replacements of plant and machinery Rs. 2,50,000.

This leaves a balance of Rs. 2,78,821-0-4, from which a sum of Rs. 1,10,091 was paid as interim dividend at 6 per cent. for the half-year ended 31-12-1943 and the directors now recommend payment of a final dividend at 6 per cent., (making in all a dividend of 12 per cent. for the year) and a bonus of 3 per cent., both free of income-tax, on each paid up share. This will absorb a sum of Rs. 1,65,136-8 and leaves a balance of Rs. 3,593-8-4, which will be carried over to next year.

The total of the reserve funds so far built up amounts to Rs. 18,81,000.

The mills' buildings, machinery and plant, stocks and stores are insured for a sum of Rs. 38,92,243.

Mysore Spun Silk Mills, Ltd., Channapatna

(Manager : K. Shamsuddin Khan)

Due to the purchase and installation of some additional machinery for the Spun Silk Mills as well as the noil section of the factory, the production of spun silk and noil yarns increased substantially, thereby placing the factory on more secure basis than before. It is under contemplation to install a few more units for the noil department.

The Government of Mysore had established a silk filature of 40 basins in the premises of the mills on certain terms. During the year under report, the company has purchased it from Government and undertaken to expand it further by the installation of 160 basins more with a view to manufacture parachute silk to be supplied to the Government of India for war purposes under the silk filature expansion scheme. One hundred and twenty of the additional basins have been already erected and the remaining are under erection. The construction work is progressing satisfactorily.

The combined working of the spun silk factory and the filature in the year 1943 has resulted in a net profit of Rs. 6,31,208-11-3 after meeting the depreciation on all the fixed assets for the year. Adding to this the sum of Rs. 2,453-13-6 which was carried forward from previous year's profits, the total amounted to Rs. 6,33,662-8-9. After making the necessary provision for income-tax and super-tax, the net profit available for distribution amounts to Rs. 4,57,880-4-9. An interim dividend at the rate of As. 8 per share amounting to Rs. 45,764-2-0, was declared and paid in October last, thus leaving a balance of Rs. 4,12,116-2-9 which the directors propose to dispose of as follows :—To credit to reserve fund bringing the total to Rs. 3,00,000, Rs. 1,82,615-8-0 ; reserve for fluctuation in the value of raw materials and for heavy replacements of plant and machinery Rs. 1,00,000 ; dividend equalisation fund Rs. 50,000 ; dividend at As. 8 per share (5 per cent.) free of Mysore income-tax for the second half year making a total of 10 per cent. for the year Rs. 47,643 ; bonus to shareholders at As. 4 per share (2½ per cent.) for the year free of Mysore income-tax Rs. 23,821-8-0 ; and to carry forward to next year Rs. 8,036-2-9.

Moradabad Spinning and Weaving Mills Co., Ltd. (and Reduced), Moradabad

(Agents : Alakhdhari & Sons)

During the year 1943 the company made a profit of Rs. 7,73,799-15-7 which is disposed of as follows :—Appropriation for depreciating the cost of mill buildings, machinery, furniture and railway siding at rates sanctioned by the Government Rs. 22,948-6 ; paid for war risks insurances Rs. 14,999-4 ; bonus of 3 months' pay to mill employees Rs. 20,133-12 ; net profit carried over to the balance-sheet Rs. 7,15,718-9-7.

Ad-interim dividends of Rs. 56 and Rs. 28 (total Rs. 84) have been distributed to the shareholders. Pending assessment of income-tax, the balance at credit in the profit and loss account should, in the directors' opinion, be held in reserve and carried forward.

The company is striving to rely in an increasing measure for the manufacture of spare parts and equipment on its own workshops.

Free medical relief and educational facilities are provided for the mill employees and their dependents.

The mill buildings, machinery and stocks are fully insured against fire risks. War risk insurances of the mill property have been duly effected.

NEWS OF THE MONTH

Indian

Cost of Living Index in Bombay.—During August, 1944, the working class cost of living index number for Bombay, with the average prices for the year ended June 1934, equal to 100, was 250. This was nine points higher than in the preceding month. The index number for food articles advanced by 17 points to 287.

Fire in Seksaria Cotton Mill.—Damage estimated at about Rs. 50,000 was caused by a fire which broke out in the Seksaria Cotton Mill at Tulsi Pipe Road, Bombay, on 18th September 1944.

Ten fire engines from different stations brought the fire under complete control within an hour. The Salvage Corps and the police also rendered help.

Labour Inquiry Committee.—It is understood that the Labour Investigation Committee, the Government of India, is conducting a wage census only in the textile industry, under the supervision of Mr. R. P. Maheshwari. The object of this inquiry is to recommend to the Government of India reasonable and minimum wages in mills and factories.

Consumption of Cotton by Indian Mills.—The Indian cotton mill industry consumed in July 341,521 bales of Indian cotton as compared with 385,015 bales in the same month a year ago. The total consumption of Indian cotton by mills during the 11 months ended July is 3,767,077 bales as against 3,929,437 bales in the corresponding period of the previous year.

Bombay Colour and Chemical Merchants' Association.—A meeting of colour and chemical merchants was held in the office of Messrs. Chatrabhuj K. Mavji at 70, Vadgadi, last month under the presidentship of Mr. Ranchhoddas Karsondas Rangwala, when the Bombay Colour and Chemical Merchants' Association was established to start a movement for the licensing of the dealers and safeguarding their interest in fast dyes. The following office-bearers were unanimously elected:—

Messrs. Ranchhoddas Karsondas Rangwala (President), Chotalal Dwarkadas Mehta (Vice-President), Purshottamdas Girdharlal and Muljibhai Somabhai (Joint Secretaries), and Kantilal N. Shah (Treasurer and member of Committee).

Textile Calendar

OCTOBER

5th, Thursday :
Second Quarterly Meeting of the Textile Stores and Machinery Merchants' Association, Bombay.

13th, Friday :
Quarterly Meeting of the Textile Control Board in Bombay.

19th, Thursday :
Bombay Union Dyeing Mills Silver Jubilee Celebrations, Mr. D. M. Khatau presiding.

26th, Thursday :
Government of India's Policy Committee on Trade and Industries meets in Bombay, Sir Ardeshir Dalal, Kt., presiding.

27th and 28th, Friday and Saturday :
Sixth Plenary Labour Conference meets in New Delhi.

NOVEMBER

10th, Friday :
The V. J. T. Institute Textile Association, Paper on Researches carried out at the Institute by Prof. D. F. Kapadia, B.A., M.Sc. (Tech.)., Sir Sorab Saklatvala presiding, at Electric House, Fort, Bombay.

Government Subsidy for Hand-spinning.—With a view to developing hand-spinning in the famine centres at Gudur and Yemiganur in the Bellary and Kurnool districts, the Government of Madras have sanctioned the payment to the Rayalaseema Moola Khadi Prathisthapanam, Tadpatri, of a grant of Rs. 4,626 for the training of 200 spinners at the two centres for a period of six months and a maximum subsidy of Rs. 366 and Rs. 1,625 on the quantity of yarn and cloth respectively produced during the latter half of 1944-45. They have also sanctioned for the purpose to the Prathisthapanam a loan of Rs. 4,000 at 3½ per cent. per annum repayable at the end of three years from the date of disbursement.

Increase in Number of Workers Employed in Factories.—The various Indian industries were, on an average employing 24,37,246 workers daily in 1943, as against 22,82,237 in 1942, according to the annual statistics of factories collected in the Labour Department of the Central Government.

The Government and local fund factories employed 355,873 men in 1943, as against 299,893 in the previous year; in the case of all other factories, the number rose from 19,82,344 in 1942 to 20,81,373 in 1943.

The largest number of men were employed in Bombay, where the figure for daily average employment stood at 7,11,525. Industries in Bengal employed 6,95,043 men, while those in Madras employed 2,62,347.

Extending Scope of Technical Departments in the V. J. T. Institute.—The Government of Bombay have sanctioned a scheme for the extension of the Mechanical and Engineering departments of the Victoria Jubilee Technical Institute, Bombay, in accordance with the 15-year plan for post-war development in the province.

The scheme, which involves a capital expenditure of about Rs. 8½ lakhs and a recurring expenditure of Rs. 1,75,000 spread over a period of five years, provides for an increase of 50 per cent. in admissions to both the departments.

The scheme will take effect immediately and will enable the Institute to train a very much larger number of students and also to provide facilities for the type of training best suited for the immediate post-war needs of the province.

Fifteen-Year Plan for Mysore State.—A comprehensive plan for the economic development of Mysore, involving an expenditure of Rs. 200 crores in 15 years, on the same lines as the Bombay Plan and the Plan for the Economic Development of India, has been submitted by Mr. P. H. Krishnarao, Commissioner for Development and Planning in Mysore, to the Mysore Government.

A special committee with Diwan Bahadur K. R. Sreenivasa Iyengar as Chairman has been constituted by the Government to examine the scheme in detail and submit its report.

The plan contemplates all-round progress of Mysore State under the heads agriculture, including forestry, fisheries and sericulture ; trade, commerce and industry ; public works and communications ; electric power and social services, including education, medical relief and public health, housing and social security. Under each section the conditions in Mysore are considered against the background of Indian conditions.

The Mysore Plan aims at catering for two-thirds of the entire population of the State living in 3,700 villages each with a population of over 500.

Interim Dividends Declared by Cotton Mills.—At a meeting of the Directors of the Barsi Spinning and Weaving Mills Ltd., held in Bombay on 19th September 1944, it was decided to pay an *ad-interim* dividend of Rs. 15 per share (ordinary) free of tax, to the shareholders whose names stand in the company's register on the 27th September 1944.

At the meetings of the Directors of the Vishnu Cotton Mill Ltd., and the Lakshmi Cotton Manufacturing Co., Ltd., held in Bombay on the 3rd October 1944, it was resolved that an *ad-interim* dividend of Rs. 8 and Rs. 25 respectively per ordinary share free of tax, be paid to the shareholders whose names stand in the company's register on the 21st October 1944.

The Directors of the Central India Spinning, Weaving and Manufacturing Company, Ltd., have decided to pay the following final dividends to the shareholders for the year ended 30th June 1944 :—Rs. 12-8 per share on preference shares and Rs. 10 per share on ordinary shares.

The Directors of the Ahmedabad Advance Mills, Ltd., have decided to pay the following final dividends to the shareholders for the year ended 30th June 1944 :—Rs. 2-8 per share on preference shares and Rs. 10 per share on ordinary shares.

Shuttle Manufacturing Company in Bombay.—A company named the Modern Shuttle Manufacturing Co., Ltd., has been formed with its Registered Office at 15, Forbes Street, Fort, Bombay for manufacturing and dealing in shuttles, bobbins and other wooden textile parts and accessories.

The authorized capital of the company is Rs. 5 lakhs, divided into 50,000 shares of Rs. 10 each.

Mr. M. S. Pandit, one of the directors of the company, agreed in March 1944 to purchase for the sum of Rs. 48,000 from the proprietors of Messrs. Modern Shuttle Manufacturing Co., Dadar, Bombay, the machinery together with stores and the right to use the name of "The Modern Shuttle Manufacturing Co.". From a valuation made by a director of the company, Mr. P. N. Agate, who is a chartered engineer, it appears that the present value of the said machinery and stores alone would exceed Rs. 80,000. The company has therefore agreed to purchase the said machinery together with stores and the right to use the said name from Mr. Pandit for Rs. 48,000.

The machinery is at present lying at Bhavnagar, but the directors propose to shift the same to Bombay at a very early date after obtaining the necessary permission from the Government. Until such permission is received the company proposes to work at Bhavnagar.

Co-operative Plan for Industries: Start Made in Bombay.—A comprehensive scheme for the mobilization of India's resources by the establishment of industrial co-operatives on the Chinese model is being worked out by a group of public workers in Bombay.

The "Indusco" line, which formed the backbone of the defence manœuvres of China, is one of the little known aspects of the Chinese defence against Japanese aggression. Myriads of mobile co-operative production units constitute a special feature of the Chinese industrial organization. Not only could these units be quickly rebuilt in the event of damage or destruction by air raids, but also offer the largest scope for the employment of disabled soldiers.

An Industrial Co-operative Association, it is learnt, has been formed in Bombay with a view to establishing India's small industries on a co-operative basis. Among the main objects of the Association is to see that workers are safeguarded from the financier, the promoter, the manager and the middleman. Shareholders must work in the co-operative and a mere money share is not allowed.

At present, the activities of the Association are limited to the Province of Bombay. Co-operatives of hand-made paper manufacturers and leather workers are being organized.

Among the public workers who are actively associated with the organization of industrial co-operatives are Mr. V. L. Mehta, Mr. L. N. Renu, Mr. Maurice Frydman and Mr. L. Gopala Rao.

Foreign

Manchester University Accepts I. C. I. Offer.—The University of Manchester has accepted an offer by Imperial Chemical Industries, Ltd., to provide eight Research Fellowships for a period of seven years The value of the Fellowships will normally be £600 each a year and they will be offered in chemistry or physics and related subjects.

U. S. S. R. Silk Output.—Silkworm cocoon cultivation in Takzhikistan, in the Soviet Union, has been expanding steadily in the past few years, according to a Russian publication. An adequate number of silk-worm eggs were produced this year so that 3,000 baskets were delivered beyond the borders of Takzhikistan to Uzbekistan, and 10,000 baskets were released to recently liberated areas in the Ukraine and Russia proper. Prior to 1943, silk-worm eggs had to be obtained from neighbouring republics, and in 1943 the domestic production was sufficient only for the Republic's own breeders.

Wilson Brothers Bobbin Co., Ltd., England.—The directors' report of this well-known firm of bobbin and shuttle makers of Garston, Liverpool, for the year ended 15th July, 1944, states that after providing for all trade charges and reserve for taxation, the net profit of the business amounts to £26,587 16*s.* 8*d.*, which, added to the balance brought forward from the previous year of £1,534 4*s.* 5*d.*, makes a total of £28,122 1*s.* 1*d.*, which the directors recommend should be appropriated as under :—A dividend of 6 per cent. on £285,000 (subject to income-tax) £17,100, transfer to reserve fund (making a total of £45,000) £10,000, and carry forward to the credit of next year's account £1,022 1*s.* 1*d.*

Mr. William Arthur Robinson, Manager of their Indian Branch, has been elected a Director of the company.

Government Grant to Shirley Institute, Manchester.—Speaking at the annual meeting of the British Cotton Industry Research Association recently, Dr. F. C. Toy, the new Director of the Shirley Institute, Didsbury, England, said that as soon as the urgency of war work fell off the Institute would turn its attention to the problems concerning the future, and had in view developments which he believed would be of value to the cotton industry. Mr. H. Parkinson, Honorary Treasurer, pointed out that a Government grant of £35,000 had been made to the Institute. This was the maximum amount the association was able to earn under the existing agreement, and it was entirely due to the overwhelmingly generous response to his appeal for additional subscriptions during the year. He asked for £8,000, but every section of the industry responded so well that the amount received was £15,541.

Imports of Raw Cotton into United Kingdom and Piecegoods into India.—The following final statement shows the imports of raw cotton into the United Kingdom from India and of cotton piecegoods into India from the United Kingdom with reference to Article 10 of the United Kingdom—India Trade Agreement, 1939 :—

	Bales of 392 lbs.
Net imports of raw cotton into the United Kingdom from India during the "Cotton Year" ending 31st December 1943	137,737
	Yards.
Gross imports of cotton piecegoods into India from the United Kingdom during the period 1st April 1943 to 31st March 1944	3,283,512
Re-exports of cotton piecegoods of United Kingdom origin from India during the same period	446,536
Net imports of cotton piecegoods into India from the United Kingdom during the "cotton piecegoods year" ending 31st March 1944 ..	2,836,976

Cotton Mission Report.—Mr. Lyttelton, the Minister of Production in the British Cabinet recently stated that he had received the report of the Lancashire Cotton Mission to the U. S. A. and that the question of making it public was being considered. There is great interest in the report in all sections of the industry, and it is generally hoped that nothing will cause the Government to withhold it from publication. It is felt that the mission which Sir Frank Platt took with him must have pursued its investigations closely and expertly and that its report cannot fail to contain much plain speaking on essential points.

It is realized that there are many radical differences and many minor ones between the British and the American cotton textile industries. Some of the differences are perhaps not widely known or appreciated, and it is hoped that the report will not only call attention to all of them but that it will also show which of them works to the advantage of the United States and the extent of any such advantage, what changes they suggest for a long-term policy for Lancashire, and what changes could be made now to increase war-time production. In some quarters it appears to have been forgotten that the object of the mission was to find means of increasing Lancashire's current contribution to the textile supplies of the United Nations.—*Manchester Guardian.*

Callender's Cable and Construction, Ltd., England.—The 48th annual general meeting of Callender's Cable and Construction Co., Ltd., was held on 3rd July in London. The directors' report stated that the profit, after providing for taxation, depreciation and directors' fees came to £465,115. Adding to this the balance of £306,552, brought forward from the previous year, the total available came to £771,667. Dividends paid during the year upon both classes of Preference stock, and an interim on the Ordinary stock, amounted to £112,196, leaving a sum of £659,471.

The directors after careful consideration as to how to deal with this amount had decided to transfer to reserve for war contingencies, etc., the sum of £175,000, earmarked as a contingent reserve for reinstatement of employees in the fighting services, under the Reinstatement in Civil Employment Act, 1944, to pay a final dividend upon the Ordinary stock of 10 per cent., absorbing £112,391, and, in addition, a cash bonus of 5 per cent., both less tax, on all the issued Ordinary stock, which would take another £56,196. These altogether totalled £343,587, leaving a balance to be carried forward of £315,884 —an increase of £9,332 on the preceding year.

It was proposed that a further sum of £175,000 be added to the reserve for the "equalization of dividends or for war contingencies" which last year was made up to half a million.

W. T. Henley's Telegraph Works Co., Ltd., England.—At their annual meeting held on 30th June in London, Sir Montague Hughman (Chairman) said that a considerable proportion of the work which they were doing at present was quite outside their ordinary peace-time business. They had been able to render fine war service by the manufacture on an extensive scale of special requirements some of which were the results of their own inventions.

After referring to the institution of the company's non-contributory sickness and accident benefit scheme, Sir Montague said that the works councils had continued to function very well and afforded an admirable means of bringing the management and the workpeople together. The rubber cable works, the paper cable works and the engineering department had been busily employed and he congratulated the managers, Messrs. McArthur and Judge, on the results. The research and technical departments had done excellent work during the year. Sir Montague recalled that the company organized research laboratories twenty-five years ago.

The Chairman reviewed the accounts and said that the balance on trading account was £438,209. The profit for the year shows an increase of approximately £18,000 compared with 1942. During the year approximately £61,000 was spent on the maintenance of the plant.

The report and accounts were unanimously adopted and the meeting sanctioned the declaration of the final devidend of 10 per cent. and 5 per cent. cash bonus making with the interim dividend 20 per cent. for the year.

U.S.A. Textile Research Groups Agree in Planning Efforts.—An understanding has been reached by representatives of the American Association of Textile Chemists and Colorists and of the Textile Research Institute, at a recent meeting, to avoid any danger of duplication of effort by discussing with one another new research projects to determine any possible interference.

The Textile Research Institute proposes to undertake research work, both fundamental and applied, on all phases of textile manufacture. The American Association of Textile Chemists and Colorists is primarily concerned with the wet processing of textiles and is pre-eminent in the development of standard test methods for the use of the textile chemist, dyer, colourist, finisher, converter and consumer of textiles. The two organizations have a common interest in the promotion of knowledge of textiles through research, but their programmes do not overlap and through voluntary co-ordination will avoid any possibility of duplication.

Accordingly, the industry should not hesitate to provide financial support in behalf of the research work of both organizations in proportion to the interest in their respective programmes.

F. S. Blanchard, President of the Textile Research Institute, and Giles Hopkins, Chairman of its Applied Research Committee, represented the Institute at the meeting. W. D. Appel, President of the American Association of Textile Chemists and Colorists, Hugh Christison, Vice-President, P. J. Wood, past President and Leonard Little, Chairman of its Executive Committee on Research, represented the A. A. T. C. C.—*Cotton Trade Journal.*

Fifty Years Ago

(From the *Indian Textile Journal*, October 1894)

On Managing Agents

"The custom of leaving the whole control of a joint stock mill in the hands of a man without any technical knowledge of spinning, weaving or dyeing and who, in addition, has private commercial interests that may often be antagonistic to those of the mill and the shareholders, has received careful consideration, and the result has been an agitation for a change in the laws affecting the responsibilities of mill agents, which, it is to be hoped, will add much to the security of the investing public."

The Indian Textile Journal

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Founded by SORABJI M. RUTNAGUR

55 th Year

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EDITORIAL

Lancashire's Post-war Plans

IN the period between the last war and this the British cotton industry has been steadily contracting owing partly to general world depression, partly to Japanese competition, and partly to the rise of new cotton manufacturing countries like India and Brazil. In view of its vital importance as the major export industry of England its decline has been seriously exercising the minds of the authorities, who have been busy lately planning for its reconstruction in the post-war period. Some time ago a special committee of the Cotton Board in England submitted its plans for the development of the industry and Government's reply to it was published only recently. They believe that the adoption of a five-point programme which they have outlined would put a period to continued shrinkage in employment, in output and in exports in the Lancashire textile industry and thus avert what might turn out to be a " disaster to Lancashire and Britain." The five points relate to: amalgamation of spinning units to bring about more efficient and financially strong units; re-equipment; overhaul of merchanting side in order to enable the producing sections to achieve economies of continuous runs and bulk production; modification and simplification of the wage-structure; and extension of double shifts, without which " installing of modern machinery will not in many cases be justified."

The report of the Cotton Board Committee was released much earlier. It recommended that there should be established a compact cotton board after the war and its powers would include the registration of firms engaged in the industry, collection of levies and administration of price-management schemes, administration of redundancy or excess capacity schemes, collection of statistics, and promotion of scientific and industrial research; it is to inherit the many duties of the board appointed under the Cotton Industry (Reorganization) Act, 1939, which was suspended on the outbreak of the war. The Committee thinks that the best that Lancashire could look forward to in the post-war period is an increase of 5 per cent. in domestic demand and an increase in export demand of half as much again as the 1939 level, which is the same as the 1932 level. This export demand could be met by the existing spinning mills (including those which were closed under the concentration scheme), but it would have excess capacity in the weaving and finishing sections, which would have to be met by making the installation of new looms conditional on an equivalent number of old looms being scrapped and by collecting a levy from the finishing section to compensate those who choose to drop out. It is feared, however, that the labour force available at the end of the war might not exceed 70 per cent. of that of 1939, making it difficult, therefore, to reach even the 1939 level of production. The Cotton Board Committee therefore urges the speedy introduction of reforms to make the industry more attractive in respect of security of employment, methods of training and conditions of work. It may be possible, however, to minimize the efforts of labour shortage by the adoption of labour-saving machinery and suitable reorganization of the industry. In the first five years after the war the British industry would require £43,000,000 worth of new machinery according to the Committee's estimate. Among the recommendations made in this connection are that Government should give textile machinists early relief from war work, assure priority to the home trade, and arrive at an understanding about prices and requirements of imported machinery. " Post-war requirement," the Committee observes, " is not one problem to be met by one solution, but a continuing and vitally important element in the total problem of maintaining an efficient and successful industry," and its solution can only be " continuing collaboration between cotton manufacturers, machinists and Government." Describing the work of the Shirley Institute, Manchester, the Committee refers to several new machines for spinning which were on trial and suggests that the Cotton Board should devote funds for experiments on a mill scale. It urges Government to give the industry early relief from all burdensome taxes, particularly the Excess Profits Tax.

In a supplementary resolution the Cotton Board Committee expresses its opinion in favour of larger groups, formed voluntarily and pursuing common policies, in the spinning section of the industry, since it would facilitate the task of re-equipment and reorganization. The Committee is at the same time convinced that a system of managed prices, providing for both maximum and minimum prices, is the very foundation of any plan of reorganization or reconstruction. In the course of his presidential address at the latest annual meeting of the Manchester Chamber of Commerce, Mr. Frank Longworth defined price-management as a " system which, after ensuring a satisfactory wage for the workers and a reasonable return to the producers, would provide for the greatest possible flexibility above that; in other words, a minimum price which is fixed having due regard to efficiency and subject to safeguards in the interests of the consumer and the national economy." While maximum prices are expected to be a useful weapon against inflation, the industry considers minimum prices indispensable (Mr. E. A. Carpenter, of the Cotton and Rayon Merchants' Association, Manchester, compares their value to that of a life-belt in a perilous sea), if manufacturers are to sink vast capital sums in re-equipping and otherwise improving the efficiency of the industry before entering upon the highly competitive era of the post-war period. But Government are believed to have already rejected the industry's plea for statutory minimum prices because they might, in their opinion, lead to restriction rather than expansion and to the perpetuation of inefficient and old-fashioned methods by some firms.

The report of the Cotton Board Committee has received wide publicity. The British Government have asked the Committee to amplify and develop the subject of supplies and requirements of plant and equipment as dealt with in its report. The outstanding importance of Lancashire's throwing all energies into modernizing plant and increasing output with economy of labour force is stressed by the *Manchester Guardian*, which considers the Cotton Board's programme of re-equipment totally inadequate, it being no more than 8½ per cent. of the value of the capital invested in the industry. " And this after five or six years of no replacement at all and several decades of little replacement and modernization." It points out further that, though the report is keenly alive to the need for extensive replacement of machinery, for stimulating textile machinists to improve their designs, for better labour methods and for giving technical research its due place in the industry, it does not point out how American cotton mills are technically superior to Lancashire's. And the report of the Platt delegation to America, which has since been released, has only confirmed England's worst fears; in almost every department the American industry is proved to be infinitely better equipped and more efficient than its English counterpart. There is also general regret that the Cotton Board Committee has failed to discuss the kind of post-war exports—whether the contemplated increase is to be in quality production or in the cheaper lines. As the *Manchester Guardian* points out, " the hope for Lancashire's survival lies in the industry becoming more textile-minded (in the widest sense) and not more cotton-minded."

The Cotton Board Committee's report and the British Government's orders on it are of special interest to the Indian cotton mill industry, which has now for nearly 18 months been under official control and is likely to continue to be so controlled for a fairly long time after the war. The British Government's rejection of the plea for managed prices, the Cotton Board's reluctance to enforce compulsion whether in buying out redundant plant or in bringing about larger units of production, and the general agreement on the necessity for a co-ordinated re-equipment programme are points whose significance the Indian industry should not fail to note.

Government Assistance to Cotton Textile Industry

A Positive Policy Wanted

By P. C. JAIN, M.A., M.SC. (*Econ.*) *London, University of Allahabad*

(*Specially Contributed*)

THE Government policy with regard to the Indian cotton textile industry, as to all other industries, was one of complete *laissez faire* in the pre-1939 period. Due to the war, and more especially from the middle of 1943, the Government of India have been compelled to give up this policy of indifference and inactivity. But the chief aims of war-time controls have been to safeguard the interests of consumers, to make the necessary cotton textile goods available to the Defence Services, and to conserve such scarce raw materials as coal and chemicals. It is doubtful whether the war-time controls, unless they are continued in peace-time on systematic lines, would have much lasting effect on the organization of the Indian cotton textile industry. The changes that have taken place in the channels of cloth distribution, the range of output and the technique of production may fade out if the industry is left to its own resources in the post-war period. Such, however, appears to be the intention of the Government of India if the disinclination of the Textile Commissioner to commit himself beyond the war period and the absence of Government schemes for the post-war rehabilitation of the cotton textile industry are taken into account.

It is not necessary at this late stage to prove the necessity for Government's adopting a positive policy towards the Indian cotton textile industry. The thing is self-evident. The principle of *laissez faire* which was evolved in 1776 is now out of date. The British Government has long given it up and has evolved a plan for the post-war reconstruction of the British cotton textile industry in which the Government would play a predominant part. We ask for nothing more than a similar policy for India. It would be our task in this article, without bewailing for past neglect of our interests, to point out the way in which the Government of India can help the cotton textile industry to reconstruct itself, and in this we shall closely follow the scheme evolved in Great Britain. The problems facing the cotton textile industries in the two countries are very much alike and we see no reason why the Government of India should not do for the Indian cotton textile industry what the British Government proposes to do for the British industry.

Machinery

One of the most pressing needs of the Indian cotton textile industry in the immediate post-war period would be the modernization of machinery. Due to high pressure working the technical equipment in our cotton mills, some of which was already half a century old when the war started, has depreciated at a much faster rate than would have ordinarily been the case. It is reliably estimated that for profitable operation in the post-war period nearly 50 per cent. of the spinning and weaving machinery will have to be replaced. The important point is that the Indian textile manufacturers, in the changed conditions of machine-supply expected to prevail in the post-war period, cannot effect this replacement of machinery unaided. It is only through Government effort that an adequate supply of textile machinery would be available to us. It is not only a question of paying the price but of obtaining priorities with the manufacturers of machinery in the U.K., U.S.A., and other countries and arranging for the necessary amount of foreign exchange. The priorities can only be secured by agreement with the respective Governments in these countries and the Government of India is best fitted to take up these negotiations.

According to one estimate, the American cotton textile industry would require at least 16 million new spindles for replacement purposes in the immediate post-war period since out of 23,846,000 spindles in operation in 1943 nearly 68 per cent.

were more than 20 years old. But the American textile-machine industry at present levels of capacity cannot supply more than 8 lakh spindles per year. The textile-machine output in the U.S.A., therefore, will not be enough to meet even the internal demand, but it is reported that out of consideration for the foreign markets it is proposed to allot 10 to 15 per cent. of this output for export. There will be a great scramble for securing part of this supply and the Government of India has no time to lose if it has to give effective assistance to the Indian industry. The same is the position in Great Britain where it has been estimated by an official committee, through inquiries made of a representative cross-section of firms, that in five years after the end of hostilities textile machinery worth £43 millions would be necessary for purposes of replacement and renovation. The British textile-machine industry, which has still to supply some orders booked earlier, cannot cope with this huge demand. Special efforts would, therefore, be necessary on the part of the Government of India to induce the Board of Trade to allot a reasonable quota of textile machinery to the Indian mill industry. In the absence of this special effort the Indian textile mills are not likely to get any machinery at all for few years in the post-war period. This would not only ruin our textile industry but would have very adverse effects on Government tax revenue, the consumers, and the growers of cotton in this country.

Apart from this, the Government of India's sympathetic attitude is needed in enabling the cotton mills to accumulate adequate reserves for post-war replacement of machinery when considerably higher prices will have to be paid. This would involve a provision for more liberal depreciation allowances than are at present in force. The Bombay Millowners' Association submitted a revised scheme suggesting to the Government the grant of depreciation allowances at the rate of 10 per cent. for single shift, 20 per cent. for double shift, and 25 per cent. for three shifts operation. This scheme is reasonable, provided account is also taken of the much higher prices that will have to be paid for textile machinery in the post-war period. The purpose of a depreciation fund is to build up adequate reserves to be able to replace the machinery when it is discarded, and no purpose will be served if the depreciation fund is one-third or one-half of the price to be paid for new machinery. Moreover, let the Government of India earmark a higher proportion of the E.P.T. proceeds for the post-war reconstruction of the textile mill industry. This is necessary in view of the special difficulties which this industry is bound to face in the post-war period.

This would solve the immediate problem but from a long period point of view it is necessary to manufacture textile machinery in our own country. We already possess considerable experience in making cruder types of machinery and the technical training received by our workmen during war-time along with our potential resources in steel, hydro-electric power and minerals should enable us to set up an efficient machine manufacturing industry on modern lines. The Indian industrialists would be able to set up such an industry if they are assured of getting the requisite type of machine-manufacturing equipment and technical assistance from foreign countries. The Government of India's help is needed in obtaining them. In a free market the Indian industrialists themselves would have secured these, but since the supply of machinery will be under control for a considerable time in the post-war period the imports of machinery and technical skill would not be available without Government intervention on behalf of the Indian mills.

Internal Organization

Another important matter in which Government help would be necessary is in putting the internal organization of the cotton textile industry on sound lines. The Indian manufacturers have shown an individualistic attitude, as has very much been the case in Great Britain, and a central organization has not come into existence even when it would have been in the best interests of the industry because some dissenting producers have chosen to stand out of these negotiations. In Great Britain the Cotton Industry (Reorganization) Act, 1939, provided for statutory enforcement of schemes of reorganization and price management if a majority of the mills agreed to these arrangements. The Cotton Board Committee on British industry in its report early in 1944 emphasized the urgent need of fixing maximum and minimum prices for piecegoods and yarn in peace-time in continuation of war-time controls so as to prevent cut-throat competition between the suppliers and rise of prices due to inflationary tendencies. The Committee made it clear that it disapproves of "price management in terms of groups of producers meeting in secret and fixing prices to protect the high cost producer," but it fully supported price fixation under Government supervision as that would strengthen the industry by preventing the evil consequences of weak selling. In the "Five-Point Programme" for the British cotton industry announced by the British Government in September 1944, the first item is the bringing about of such amalgamations, particularly in the spinning section, as are required to secure efficient and financially strong units. The British cotton textile industry has evidently made adequate preparations to face the post-war problems.

We in India, on the other hand, are as yet thoroughly unprepared although the necessity of post-war planning has been constantly emphasized. In this country there are far too many inefficient mills and, in spite of war-time standardization of output, they produce a large number of types and designs of cloth which necessarily imposes high costs of production. There have been innumerable examples of cut-throat competition in the pre-1939 period. What is worse, the producers have failed to come to an agreement among themselves but this was only to be expected in view of a similar experience in Great Britain. It is only through Government action that the organization of the cotton textile industry can be improved. Let the Government of India announce a definite programme for the Indian cotton textile industry after taking the manufacturers into full confidence and giving all the interests involved an opportunity of representing their case to the Government. A Cotton Industry (Reorganization) Act might be passed giving statutory sanction to the proposed scheme and the Textile Control Board, in a revised form and with adequate representation of the manufacturers and other interests concerned, might be retained in the post-war period to operate the scheme.

The exact details of the scheme will have to be settled after careful investigations but it is possible to indicate some of the points which such a scheme would cover. The demand for Indian-made cotton goods would be subject to fluctuation but the Textile Control Board would so adjust production that it would not exceed the expected market demand. This will prevent overproduction and the consequent evils. In order to achieve this result the Textile Control Board would have power, subject to adequate safeguards, to order the closing down of any particular mill, or some sections of it, which in its opinion is redundant and whose operation is not justified by the existing market demand. Or alternatively it might be necessary to wind up some mills altogether. In either case, adequate compensation would be paid to the owners of these mills. Secondly, the number of types and designs of cloth will have to be fixed ; it is by no chance necessary to fix them once and for all but changes would be introduced from time to time in the light of experience. Such standardization of output would enable large-scale operation at lowest costs. It would also be in the interest of the consumers who would thereby be saved the additional botheration and cost of a multiplicity of designs. Thirdly, with full care for the interests of consumers and labourers, minimum and maximum prices would be fixed for all lines of production. The object of maximum prices would be to prevent losses to consumers from inflation of prices due to scarcity of goods while the object of minimum prices would be to prevent losses to producers due to low prices resulting from cut-throat competition, recession in demand, and trade depression. The war-time experience of price fixation would prove of immense value in this task and a much greater control on the distribution of cloth would have to be enforced than is at present the case, in order to make price control policy successful. Fourthly, in order to ensure smooth working of the scheme the Textile Control Board will have to be given power to fix adequate wages and conditions of work for operatives in the cotton mills and to recommend to the Government the fixation of suitable prices for raw cotton, mill stores, and chemicals, etc., by their respective Control

Boards. In the absence of fixed wages and raw material prices it would not be possible to lay down and enforce the price at which cotton cloth and yarn may be sold. Finally, the Textile Control Board would maintain a central research institute which would undertake research on behalf of the cotton mills and would give advice on technical matters that arise. The funds for the running of this research institute will be paid partly by the Government and partly by the cotton mills.

It is only a far-reaching control that would solve the problems facing our cotton textile industry. A partial control, as has been our experience in many instances in India and other countries, could make matters worse ; it might create more problems than it would solve. And as we have already emphasized, a policy of *laissez faire* is completely out of date and it is at our great peril that the Government of India can think of adhering to such a policy. This would be seen in its proper perspective if we compare the unpreparedness of the Government of India with the comprehensive industrial plans which the Governments in other countries propose to adopt. In a world full of planned development any country which follows a policy of indecision and drift and adheres to archaic theories would inevitably be ruined.

Import and Export Trade

Due to war conditions the imports of cotton piecegoods into India declined from 647 million yards in 1938-39 to 3.6 million yards in 1943-44 while the exports increased from 177 million yards in 1938-39 to 819 million yards in 1942-43. The exports in 1943-44 declined to 461½ million yards due mostly to efforts made by the Textile Control Board to check exports in view of cloth scarcity in the home market. It is worth realizing that these changes in the imports and exports of piecegoods are only temporary features due to war-time conditions and it is not right to read too much into them, but at the same time some of these changes may be worth stabilizing, if we can afford to do so, in the post-war period.

If the imports increase in the post-war period, as they are bound to do if things are left to themselves, they would deprive the Indian mills of the internal market to that extent. This would not be in our best interests as the productive capacity of our cotton textile industry has expanded and we have to find markets for its output. We are not recommending a suicidal policy of self-sufficiency. We shall import some special types of cloth, and also the common varieties on a reciprocal basis, but there is no doubt that an indiscriminate influx of cloth into the Indian market has to be prevented. In order to achieve this result the Government of India will have to make use of protective tariffs and quota schemes of quantitative control. The tall talk about freeing international trade from restrictive measures in the post-war period cannot close our eyes to the realities of the situation. The other Governments, especially those of U.K. and the U.S.A., while talking of freer trade, have schemes ready for the quantitative control of trade in the post-war period as is evident from the reports of a number of official committees recently published and the statements made by a number of Government officials, industrialists, and business people in these countries. It would be futile and ruinous for the Government of India to adhere to free trade when other countries of the world have no intention of doing so. The important point is that, awaiting developments, the Government of India should also have plans of import control ready so that they might be introduced at the proper time without delay.

During the past five years we have exported cotton piecegoods to a number of countries which were formerly supplied by others. In the post-war period these other suppliers would surely make a bid to recapture these markets and to some extent we shall have to yield place to them. But it is perfectly possible to hold some of these markets if a proper export policy is adopted. In order to retain these markets we shall have to supply them goods of the right quality and finish at competitive prices. A study of consumer tastes in these markets, a minute attention to quality and finish, and sale at competitive prices would enable our textile industry to hold some of these markets. The Cloth and Yarn (Export Control) Order, 1944, would to some extent help us in this task but the effort envisaged by this Order is

(*Continued on page* 82)

Post-war Industrial Development in India

Sir Ardeshir Dalal Explains Government Policy

THE first meeting of the Policy Committee for Industries set up by the Government of India was held in Bombay on Thursday the 26th October 1944, Sir Ardeshir Dalal, Kt., Member for Planning and Development, presiding.

Among those who attended the meeting were the Hon'ble Sir Jeremy Raisman, Finance Member ; the Hon'ble Sir A. Ramaswami Mudaliar, Supply Member ; Sir Chintaman Deshmukh, Governor of the Reserve Bank ; Mr. I. H. Taunton, Adviser to the Governor of Bombay; the Hon'ble Mr. K. Shahabuddin, Minister of Bengal; Lt.-General Sir Thomas Hutton, Secretary, Planning Department; Sir Akbar Hydari, Secretary, Industries and Civil Supplies Department; Sir Theodore Gregory, Economic Adviser to the Government of India, and other officers of the Central Government, Provincial Governments and Indian States; Sir Purshotamdas Thakurdas, Mr. J. C. Setalvad, Mr. J. R. D. Tata, Dr. John Matthai, Mr. G. D. Birla, Mr. N. R. Sarker, Mr. R. A. Khedgikar, Sir Padamji Ginwala, Mr. Kasturbhai Lalbhai, Mr. Walchand Hirachand, Sir Padampat Singhania, Sir Shri Ram, Dewan Bahadur C. S. Ratnasabapathi Mudaliar, Mr. Dwarka Basi and Mr. Bishen Das Basil.

THE HON'BLE SIR ARDESHIR R. DALAL, KT.

Post-war Re-equipment

"In the absence of sufficient data," observed Sir Ardeshir in the course of his opening address, "it has not been possible to make any provisional reservation for capital equipment other than electrical. The war in Europe, however, is drawing to a close, and industrial capacity in the U.K. and U.S.A. will be gradually switched over to civilian requirements. There is likely to be a tremendous rush of orders from the devastated countries and elsewhere on the books of both these countries. It is necessary for industrialists in India, therefore, to book their requirements for capital goods as early as possible. The Government of India are considering this problem and will shortly issue a *communique* on the subject. Government do not propose to canalise the orders, which may be booked direct. But the orders should be registered with Government. Such registration will be provisional for a period not exceeding three months from the date of application, and if no objection is raised by Government within that period, the orders will automatically be confirmed, if this has not already been done specifically. A report will be required as soon as firm orders are placed; if no such report is received after six months of confirmation of the orders by Government and extension is not requested, the registration will be cancelled.

"It is proposed to set up organizations, both in the U.K. and U.S.A., and possibly elsewhere, to help industrialists in this country in securing these goods. Those who fail to register their orders will receive no assistance from Government and will not be eligible for import licences, for the import of such goods into India.

"It may be argued that the procedure here suggested is inconsistent with ordered planning. There will, however, be control, although at this stage it will be a general and negative control. Registration will be refused in cases where the industrial development contemplated is obviously uneconomic, or leads to over-concentration of certain industries in certain areas. The existing capital issues and import controls will also, of course, remain. In the beginning and before an industrial plan is ready, it is not advisable to hold up development. The volume of industrial development contemplated is so large that no great harm can be done by the booking of orders at this stage when the volume of capital goods available in many categories is not likely to be equal to the demand.

"In the case of orders on the U.S.A., dollar exchange will, of course, have to be arranged. The volume of dollars available till the termination of the war and until some arrangement is made, if possible, for a dollar loan, is likely to be limited, and to that extent it will be necessary to see that the more essential requirements for capital goods receive priority over the less essential ones. The exact procedure to be followed will be laid down in a notification to be issued shortly."

The Planning Member announced that "the Government of India are contemplating a liberalisation of the existing protection policy and the elimination of some of the conditions attaching to the grant of protection to industries. They are also contemplating a permanent Tariff Board. A suggestion for consideration is the creation of a permanent board on a very high level which would deal not only with questions of protection to industries. but also with all questions of industrial development, investment, licensing of factories, etc., in the post-war period. The provinces and States would, of course, have to be represented on a body like that."

The Planning Member stated that the main object of the meeting was to seek advice, guidance and co-operation on the lines of industrial development, and observed: "We have necessarily set a high target before us, but I am sure you will agree that it is a practical one." He referred to the speeches made by the Secretary of State for India reiterating the view that His Majesty's Government would like to see Indian industries developing to the fullest extent, and suggested that "as practical men, we accept these assurances and go ahead with the problem of industrial planning." Sir Ardeshir said it was proposed to set up a number of panels for investigating the problems of development of individual industries or groups of industries.

Industrial Committees

The provinces had been asked to set up industrial committees of their own. The list of panels, as circulated, was a tentative one. It was proposed to attach to each one of the panels one or more experts as well as a permanent officer of the Planning Department. No panel would be necessary for the cotton textile industry, as, in the Control Board, which had been set up by Government, there was a fully representative organization which was capable of dealing with the industry. In other cases, where fully representative and authoritative associations representing any particular industry existed, the same procedure might be followed.

"There are certain other industries," Sir Ardeshir continued, "as, for instance, cement, where the problems are fairly straightforward and the information already at the disposal of the Supply Department is so complete that it may not be necessary to constitute any panel. On the other hand, there are industries involving highly complicated technical processes where it is felt that no single expert could give advice which would be of more than very general assistance regarding the setting up of such industries. This applies, in particular, to industries such as shipbuilding, aircraft, manufacture of large electrical machinery, plastics and dyestuffs, etc. Individual firms will make their own arrangements with regard to such industries. The panels for such industries can only make general recommendations as regards their feasibility and location. It is the intention not only to start new industries and to maintain and expand the existing ones with the help of imported machinery, but to make as far as possible such machinery in this country.

"The question of small-scale and cottage industries also requires careful consideration. A machinery for dealing with many of the small-scale industries already exists in the Supply Department, and their problems will have to be considered in consultation with that Department.

"Regarding cottage industries, we will have to rely to a large extent on the recommendations of the Provincial Industrial Committees.

"In view of the somewhat poor response to inquiries from Government regarding industrial matters received so far, I may perhaps explain that in the formation of this Committee and the panels and in any statistics that may be required, no trade or business secrets are wanted and no confidential information, likely to be of use to others, need be discussed. The only object is to try to help industrial development.

Question of Controls

"We have so far dealt with the more immediate problems of industrial development. Among the larger issues of policy is the question of controls. There is at present a control over capital issues as well as imports. ***Planning by its very nature implies control and regulation, and even after the war, so long as planned development is the objective, controls must remain.*** Legislative measures will have to take the place of the present controls imposed under the Defence of India Rules when the existing emergency is over. Among such measures as will engage the attention of Government will be one of licensing of factories, as it would be difficult to secure the very important objective of regionalization of industries without licensing. This is, however, a long-term measure. Many constitutional questions of great importance will arise after the war in dealing with industries *vis-a-vis* Provinces as well as States. It is premature to discuss those problems now, but it may not be out of place to state that if centralised control is desired, it can best be achieved by agreement and co-operation with the parties concerned."

Sir Ardeshir invited suggestions on the question of the participation of Government in the ownership, management and control of industries. There were certain industries, such as munition works, which in the national interests, should be owned by the State, but there were others which might not afford sufficient attraction to private capitalists. In that event, they would have to be owned by the State, but the management might be either by the State or by private firms. The sulphate of ammonia industry was a case in point. There was also the question of the ownership and/or management or control of public utilities.

"Speaking for myself," remarked Sir Ardeshir Dalal, "I am not the captive of any theories or 'isms.' The final criterion to my mind is public interest. From my experience as an industrialist, I am convinced that private initiative and enterprise have still a large part to play in the development of industries. ***One thing, however, appeared to be certain, that the State would have to take a more active part and exercise a greater measure of control over industries than it had done in the past. The object of industrial development is not to make the rich richer but the country richer."***

In conclusion, Sir Ardeshir stated that what applied to the provinces also applied in a large measure to the States. The question for consideration was one of the extent to which, and the machinery under which, the States could bring themselves under the same controls regarding industrial development as existed in British India.

Government Assistance to Cotton Textile Industry

(*Concluded from page* 79)

very inadequate and a more thorough-going policy would have to be adopted. A special department of the Textile Control Board should be made responsible for developing the foreign markets by means of all the known devices. In addition to this, the Government of India will have to enter into bilateral or multilateral trade agreements with countries where these export markets exist so as to induce them to take our cotton piecegoods in exchange for goods which we would buy from them.

Sixth Labour Conference: Trends in India's Labour Legislation

By S.K.R.

(Specially Contributed)

THE sixth Labour Conference held at New Delhi on the 27th and 28th October last has been a very important one on account of the weighty nature of the subjects discussed there. Several subjects were on the agenda, of which the more important were: (1) Compulsory insurance of liability under the Workmen's Compensation Act, 1923; (2) statutory machinery for fixation of minimum wages; (3) organization of employment in the transition from war to peace; (4) revision of the Trade Disputes Act, 1929; and (5) participation of States in sickness insurance scheme for industrial labour in India. Yet another item suggested by the Labour Member to the Government of India, who presided over the Conference, was even more important than the other subjects. He suggested vital changes in the constitution of the Conference and its Standing Committee to ensure better consideration of labour problems and policies. All these subjects, it will be realized, have very far-reaching effects on employers and workers; a brief review of these will, therefore, facilitate an appraisal of the implications and repercussions of each on these interests.

Compulsory Insurance

Though the Committee of 1922 conducting preliminary examination on the Workmen's Compensation Bill (which became an Act in 1923) was pessimistic about insurance of liability under the Workmen's Compensation Act, opinion and practice in more recent times seem to favour the desirability of instituting compulsory insurance. A few of the Provincial Labour Inquiry Committees have stressed the need for this innovation and during the last few years bigger employers have voluntarily insured their liability under the Act with insurance companies. But the smaller employers have not done so, and several of them have been adopting obstructionist tactics to put off payment of compensation to injured workmen. There have been several cases in which men of straw have been employed as labour contractors, from whom it is impossible to get any compensation. And workers have not the necessary legal help or finance to fight out their claim and, therefore, prefer to accept a very much reduced amount out of court.

Yet again, even with sufficiently big employers cases may arise in which large claims from workmen arising simultaneously might create embarrassment and lead to default of payment. Compulsory insurance, therefore, not only protects the employer against heavy financial demands but also, at the same time, safeguards the workers. During the last few decades several countries with social insurance systems have made insurance of liability under Workmen's Compensation compulsory. India too has already introduced the principle in practice, for, the War Injuries Ordinance of 1941 makes insurance of employers' liability under it compulsory. The proposal to have a State insurance scheme is reported to have received the support of the Government and workers' representatives at the Conference.

Minimum Wages

The Government of India took up seriously the question of establishing machinery for the fixation of minimum wages in 1943 ; the subject has already been under discussion at two meetings of the Standing Labour Committee as also at the Plenary Session of the Labour Conference held in 1943. These discussions favoured the setting up of machinery in the form of Regional Wage Boards. The Government of India invited the Conference to discuss questions of detail like the composition of the wages boards, the functions of these boards and the effect to be given to their decisions.

Wages as a cause of industrial disputes in India have been the biggest single factor in industrial relations. Wages have been fixed arbitrarily and changes in them have depended on the comparative strength and bargaining power of the employer and the employed; neither party could support in most cases its thesis for a change based on scientific economic data, and even in cases of a rise or fall in the cost of living, the amount of increase or decrease respectively in wages demanded was quite arbitrary. Hitherto wages, thus, have had no relation to cost of living or standard of living at all. The violent economic changes as a result of the present war have brought the problem now into the melting pot. The rapid rise in the cost of living and inadequate labour supply have been responsible for erratic rises in wages and varying rates of dearness allowance. In the transition from war to peace, prices are bound to fall and direction of production to change, but any sympathetic lowering of wages might lead to widespread industrial disputes. The only way to avoid such unsettlement as would retard India's plans of production expansion and rise in standard of living, will be to correlate wages to cost of living on a scientific basis, so that wages automatically rise or fall up to a certain minimum necessary to enable workers to maintain themselves as human beings. It is only by this means that neither party can settle disputes about wage rates and levels.

Post-war Employment

The organization of employment in the transition from war to peace was one of the important items on the agenda of the 26th session of the I. L. Conference and the discussions there resulted in the adoption of a detailed recommendation setting out certain general principles to guide nations in organizing full employment. To plan well, the recommendation has suggested the collection of relevant information being started even now; suggestions have also been made regarding the procedure regarding demobilization of armed forces, and industrial demobilization and conversion; it has also stressed the importance of exchanges in handling employment problems, and the organization of vocational guidance, training and re-training programme. Certain special problems are envisaged as likely to arise, like employment of young workers, women and disabled workers and regularization of employment in particular industries. Among the immediate objectives of social and economic policy in post-war reconstruction, that of full employment has increasingly assumed the central place, because it is on full employment that raising of standard of living has to be based. Planning of organization of transition employment cannot but have the most beneficent results on industrial development and raising standard of living in India. The I. L. C. recommendation on full employment, however, is part of a much bigger general scheme, and it is to be hoped that the Government of India will soon examine the I.L.O. scheme of post-war reconstruction in its entirety to see how far and to what extent it is suited to India.

Amendment of Trade Disputes Act

The importance of perfecting machinery to prevent industrial disputes and to settle disputes as expeditiously as possible when they cannot be prevented, cannot be overemphasized in a country like India. The Central Government adopted a rudimentary Trade Disputes Act in 1929 ; that it was found very inadequate to meet the situation is seen by the adoption in Bombay of supplementing Acts in 1934 and 1938, and in the proposal of some of the provinces to adopt the Bombay Industrial Disputes Act, 1938, in their own areas. Moreover, in Bombay, all the three Acts are in force in patches. The war has further complicated the situation by the new procedures and obligations prescribed under rule 81A of the Defence of India Rules. It is, therefore, necessary to adopt a measure of all-India application now and for the future, incorporating the provisions of the existing enactments and rules in India which have been found successful in application, and to fill up the present lacunæ, especially as regards arbitration, and, thus adopt an up-to-date and progressive enactment which will not only prevent but speedily settle all trade disputes with the least loss to the industry and to workers. It is not surprising that opinion in the Conference was not unanimous on all the Government proposals. The Conference was unanimous that conciliation methods should be further extended and that Standing Orders in industries should be enforced by legislation. On the point of compulsory arbitration, however, employers and a section of workers offered opposition.

Sickness Insurance

Prof. Adarkar's report on the institution of a sickness insurance scheme in India was made available to the Conference; this scheme has recommended a State contribution of As. 8 per worker per month, made up of six annas from Provincial Governments and two annas from the Central Government. He has made recommendations regarding employers' and workers' contribution and other aspects of sickness insurance but the Conference discussed only the question of State contribution to the fund. A major difference between employers and the Government in the earlier discussions on a sickness insurance scheme for India was regarding the subject of State contribution; the employers argued that in several countries the State was contributing to sickness funds and that without financial help and support from the State, the burden on employers would be too heavy. The Government's objection was that in so far as the contemplated sickness scheme covered only the small section of industrial workers, a State subvention for such a small class was creating an invidious distinction. In view of Prof. Adarkar's recommendation in favour of State contribution, it is to be hoped that Government will now accept the principle.

Constitution of the Labour Conference

In his opening speech the President referred to the unsatisfactory nature of the present constitution of the Labour Conference and the Standing Labour Committee in that there was no clear demarkation of the functions of both. He suggested that the Conference should confine itself to general questions of policy and legislation, leaving to a Labour Welfare Committee to be set up to consider specific questions relating to restricted aspects of conditions of work. The Standing Labour Committee is hereafter to investigate and report on problems referred to it by the Conference or Government. He also discussed the constitution of a Labour Welfare Committee to consider welfare problems and the setting up of a permanent secretariat on the model of the I.L.O. These proposals had not yet been fully examined by the Government of India and when such examination is over, the results are to be placed before the Conference for discussion.

Special Rations for Manual Workers

The Conference is also understood to have discussed the question of granting special rations for heavy manual workers. It has now been widely recognized that the common yardstick of rationing should not apply to heavy manual workers and that this section should be granted special rations. In fact, supplementary rations have been sanctioned for heavy manual workers but there is always the difficulty of determining who fall into this class, because a mere rule-of-thumb provision is likely to lead to serious abuses. The United Kingdom has solved the difficulty by cutting out the system of supplementary rations and by making wholesome food available to all workers in industrial canteens. In India too the Central Government and, through its initiative, Provincial Governments have been making sustained efforts to popularize factory canteens where clean and wholesome food is made available at reasonable rates in addition to the worker's rations. With such canteen facilities, there is no reason why heavy manual workers should not get food according to their needs.

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Art-in-Industry Exhibition 1945

THE Art-in-Industry Exhibition organized by Burmah-Shell which is to be held in the Sir J. J. School of Art, Bombay, early next year, will include a section in which outstanding 1944 productions in the field of advertising, commercial art and industrial design will be shown. Entries are solicited from manufacturers, advertising agents, commercial art and press art studios, professional artists, advertisers, process studios, printers and interior decorators which will be selected on artistic merit and technical excellence of production. Further details may be obtained from the Sir J. J. School of Art, Bombay.

India's Export Trade with East Africa

Indian Government Trade Commissioner's Report for 1942-43

THE Cotton Textiles group continued to be an important item of trade imports with East African Territories. During 1942, the value of cotton textiles was £1,703,261 or 12 per cent. of all imported goods in the case of Kenya and Uganda, £1,236,620 or 33.5 per cent. of all imported goods in the case of the Tanganyika Territory and £96,574 or 9.3 per cent. of all imported goods in the case of Zanzibar Protectorate.

India supplied 88 per cent. of the cotton textiles imported into Kenya and Uganda, 93 per cent. of those imported into the Tanganyika Territory and 72 per cent. of those imported into Zanzibar Protectorate.

The position of India, as well as other important sources of supply, in the imports of each of the main categories of cotton textiles is summarised below :—

Imports into Kenya and Uganda

Cotton Piecegoods: Grey, Unbleached.—In sympathy with a decline in the total imports under this category, imports from India also fell from 36,453,906 linear yards valued at £651,170 in 1941 to 18,222,238 linear yards valued at £563,293 in 1942. Besides India, the United Kingdom was the only supplier of any significance. With regard to grey sheetings and grey drills, it is generally felt that these very important lines in piecegoods will, in every likelihood, continue to remain in the hands of the Indian exporters, since it was only Japan which could beat India in the past. There is not much possibility of the United Kingdom manufacturing this type of goods and even if it were so, India could stand in competition with her. American drills, which had gained popularity in Africa, were of heavy type suitable for use in *dhows*. These drills were known as Peperell drills. It is necessary, with a view to capturing the post-war market, that India should also supply similarly heavy types of drills of standard weights.

Bleached.—Imports from India amounted to 2,100,852 linear yards valued at £77,777 in the year 1942 as compared with 4,196,563 linear yards valued at £94,447 in the preceding year. The United Kingdom was the other chief source of supply. India has been supplying these goods for nearly four years and various qualities have been marketed, but up till now standard qualities and numbers have not been popularized. These goods used to come in the pre-war period largely from the United Kingdom and Holland.

Printed (other than Khangas).—Imports from India amounted to 3,715,024 linear yards valued at £135,480 in 1942 as compared with 7,464,932 linear yards valued at £195,861 in the preceding year. The United Kingdom was the other principal supplier. Although India is supplying these goods in fairly large quantities, all this business is possible because the United Kingdom cannot, under the existing conditions, supply this line freely in sufficient quantities. In spite of India getting a chance of trading in this line for the last four years, the Indian manufacturers have not fully studied the actual requirements of these markets, and have not standardized any goods. Printed cotton piecegoods of Indian manufacture are being sold at random in the East African markets without the dealers asking for repeats. The merchants buy whatever goods are available in the market. Unless, therefore, the Indian manufacturers pay special attention to the actual requirements of these markets, it is apprehended that business in this line might slip away from their hands in the post-war period.

Printed Khangas.—Imports from India amounted to 209,485 linear yards valued at £5,957 in 1942 as against 254,586 linear yards valued at £6,478 in the preceding year. The other source of supply of no less importance was the United Kingdom. As a matter of fact, this line of business is very important so far as East Africa is concerned, but it is a pity that the Indian manufacturers have not paid any attention to it. Although some consignments of hand-printed khangas have been imported from India, the work was not satisfactory. It is very essential that this line of trade should be properly studied. This business is done usually by European manufacturers on the basis of designs submitted by East African merchants. The manufacturers study the design and work out their cost on the minimum of a 350 scores for 4 border goods and 170 scores for no border or 2 borders. The buyer agrees to take up the required quality at the quoted price, but with a stipulation that the said design becomes the property of the buyers and is not to be offered to anybody else. Again, when the same buyer wishes to repeat the same design, he will be quoted about 3*s*. per score less than the first quoted price. This reduction in price is made possible by the fact that the design is already with manufacturers duly carved. In this way, the buyer always takes the minimum quantities with a consolation that he will take full advantage of his own design. If the Indian manufacturers work on similar lines, they can get good business now and also in the post-war period. So far, none of the Indian mills has seriously thought over this business. Hand printers have done some business with this country in this line, but as they have been supplying the same design to each and everyone, there has naturally been dissatisfaction. The result has been that local printers in East Africa have started work. They are ordering mulmuls from India and doing the printing job locally. This will work all right so long as there is a shortage of English and Continental khangas. When these will reappear, the natives of East Africa are not likely to touch the locally-printed khangas.

Dyed in the Piece.—Imports from India amounted to 2,729,336 linear yards valued at £111,436 in the year 1942 as against 9,093,235 linear yards valued at £243,371 in the preceding year. The chief source of supply was the United Kingdom. In this line of trade, India has so far standardized some qualities in black jeans, blue drills and kanikis and there is every possibility of the business remaining in Indian hands provided they keep up to these standard qualities. It will be interesting to note that these goods were standard goods in these markets even before the last war, but it was Japan only that had ousted India. It is, therefore, most essential that Indian manufacturers should devote special attention to these lines, standardize a number of qualities and thereafter make no alterations therein either in quality or finish. Another item coming under the category of dyed piecegoods is khaki drill. Although some good qualities were imported from India, unfortunately they were never standardized. Once a certain quality came under one brand but when the repeat order was sent, either that particular quality was unavailable or it got deteriorated. This is an important line of business and special regard has to be paid to quality and to fast and uniform colours. Although there is every possibility of Manchester regaining the trade in its standard qualities which are still being imported at cheaper rates than those offered by India, there should still be sufficient scope for India in the post-war period.

Coloured.—Imports from India amounted to 11,431,812 linear yards valued at £436,882 in 1942 as against 24,380,100 linear yards valued at £543,765 in the preceding year. The other source of supply, of far less importance, was the United Kingdom. India is doing at present very good business in this line but the manufacturers have not yet fully studied the designs that were popular in these markets. Some qualities and designs were copied and are selling well. In the case of handwoven goods, stricter control should be exercised over handloom weavers with a view to ensuring standard qualities and weights. Although Holland used to lead in this line of business and that country along with Manchester might endeavour to regain the trade, there is every scope for India to retain a good share of trade in the post-war period.

Cotton Blankets.—Imports from India amounted to 1,084,011 blankets valued at £170,591 in 1942 as compared with 1,333,987 valued at £162,315 in the preceding year. The United Kingdom and China were the two other sources of supply but of comparatively far less importance. India has had a very good chance of business in this line. In pre-war time, Holland was the chief supplier and even Japan could not compete on equal terms with her. Indian cotton blankets are steadily gaining popularity here and there is good scope for retaining this trade even in the post-war period.

Cotton Yarns.—India was the only source of supply. Imports in 1942 amounted to 75,113 lbs. valued at £6,477 against 166,602 lbs. valued at £6,709 in the previous year.

Imports into the Tanganyika Territory

Cotton Piecegoods : Grey, Unbleached.—Imports from India amounted to 12,718,146 sq. yds. valued at £359,865 in 1942 as against 15,309,504 sq. yds. valued at £259,537 in the preceding year. Some negligible quantity was also imported from the United Kingdom.

Bleached.—Imports from India amounted to 1,676,611 sq. yds. valued at £55,830 in 1942 as against 2,292,512 sq. yds. valued at £49,038 in the previous year. The only other source of supply of any significance was the United Kingdom.

Printed Khangas.—Imports from India amounted to 628,582 sq. yds. valued £17,350 in 1942 as against 1,042,660 sq. yds. valued at £23,484 in the preceding year. The trade was shared between India and the United Kingdom in almost equal proportions.

Printed, Others.—The bulk of the trade was with India, imports from which amounted to 4,130,959 sq. yds. valued at £119,302 in 1942 as compared with 6,698,996 sq. yds. valued at £158,055 in the preceding year. The other chief source of supply was the United Kingdom.

Dyed in the Piece.—Imports from India amounted to 7,375,008 sq. yds. valued at £279,720 in 1942 as against 14,915,307 sq. yds. valued at £339,558 in the preceding year. The United Kingdom was the only other supplier of any importance.

Coloured.—Imports were almost entirely from India, amounting to 9,359,883 sq. yds. valued at £324,828 in 1942 as against 10,566,917 sq. yds. valued at £250,395 in the previous year.

Cotton Blankets.—Almost the entire supply came from India, amounting to 34,759 score valued at £102,931 in 1942 as against 21,016 score valued at £44,314 in the previous year.

Cotton Thread.—The bulk of the imports was from India, amounting to 106,688 lbs. valued at £19,103 in 1942 against 225,469 lbs. valued at £30,565 in the previous year. The United Kingdom was the other source of supply.

Artificial Silk Piecegoods.—India supplied 217,277 sq. yds. valued at £12,065 in 1942 as against 906,667 sq. yds. valued at £40,111 in the preceding year. The other suppliers of some importance were the United Kingdom and Hongkong.

Imports into the Zanzibar Protectorate

Cotton Piecegoods : Grey, Unbleached.—India was the only source of supply in the year 1942, imports from which amounted to 229,670 linear yards valued at £8,014 as against 382,745 linear yards valued at £7,891 in the year 1941.

Bleached.—Imports from India amounted to 565,452 linear yards valued at £19,954 in 1942 against 508,678 linear yards valued at £9,161 in the preceding year. India was almost the only source of supply.

Printed Khangas.—India supplied 143,229 linear yards valued at £4,114 in 1942 as compared with 291,874 linear yards valued at £8,404 in the preceding year. The United Kingdom was the most important source of supply.

Printed (other sorts)—Imports from India amounted to 139,003 linear yards valued at £4,107 in 1942 against 974,890 linear yards valued at £22,000 in the previous year. The other supplier of comparatively far less importance was the United Kingdom.

Dyed in the Piece.—Imports from India amounted to 538,144 linear yards valued at £18,086 in 1942 against 830,743 linear yards valued at £22,436 in the preceding year. India had the bulk of the trade, while the United Kingdom, China and Arabia were the other sources of supply.

Coloured.—India supplied 439,654 linear yards valued at £15,518 in 1942 against 498,077 linear yards valued at £11,711 in the previous year. Arabia was the only other source of supply but of comparatively far less importance.

Cotton Blankets and Rugs.—India was the only source of supply, imports therefrom amounting to 12,150 blankets valued at £2,625 in 1942 against 1,607 valued at £145 in the previous year.

In spite of export and import restrictions, it is gratifying to note, says the Indian Government Trade Commissioner in his Report for 1942-43, that India has been able to increase her percentage share in the import trade of East Africa to a very appreciable extent. From a close study of the local markets, it can be stated that a very wide range of commodities, previously obtained from Japan and continental countries, are now imported from India. In 1942, India supplied about 90 per cent. of the cotton textiles imported into the East African territories. These territories form a large market for cotton piecegoods. For some years immediately preceding the present war, Lancashire supplied only about 5 per cent. of the total cotton piecegoods imported into these territories. Japan was easily the largest source of imports, while some came from India. When Japan entered the war, all trade with that country came to an end and it happened that the only manufacturing country of any importance which in these circumstances could supply the textile requirements of East Africa was India ; and the Indian textile industry by no means neglected the excellent opportunity which the war conditions provided.

It would be relevant here, continues the Trade Commissioner, to offer a few suggestions which are likely to prove useful in the interest of India's export trade with East Africa :—

(i) Indian manufacturers should appoint their agencies throughout East Africa or send out capable representatives from time to time to study the requirements of these markets.

(ii) Certain brands should be reserved for leading importers which should not be supplied to others under any circumstances either through Indian shippers or direct.

(iii) Indian manufacturers have so far been doing business on cash before delivery terms. They might examine the advisability of altering it to 90 days D/A terms just as European suppliers are doing.

(iv) Considerable improvement is needed in the bale packing and marking of goods. The Indian manufacturers are at present in the habit of varying their packing in all cases. For instance, when the market is high, the packing is usually small, but when the market goes down the packing is substantially increased. For example, a bale of coating may contain 30 pieces and the same way, at times, be increased to contain as much as 60 pieces.

(v) Special attention should be paid to the stamping of correct dimensions on piecegoods and to the correct declaration of dimensions on the invoices.

(vi) Even in prices of well-established goods there have always been differences in quotations of different mills. This may be unavoidable but such difference should be only nominal or very little.

(vii) It has been found in almost all cases that no goods in the same design or quality are available for repeat orders and the importers have to take substitutes. In such cases all efforts put in establishing a particular quality brand are rendered useless and the importers have to start everything over again.

(viii) Sometimes damaged or rejected goods are mixed up with sound stuff and as a consequence it becomes very difficult for importers to do business with any degree of confidence. Rejected or damaged goods must, therefore, be kept separate.

(ix) Nice and attractive shipment samples should be supplied for each bale in two or three sets, cut out from goods which are actually being supplied.

(x) Indian manufacturers would be well advised to advertise their goods in the East African newspapers.

Vocational Bias in Education: Bombay Government's Proposals

POST-WAR education will have a strong vocational bias, and will be of the basic type recommended by the Central Advisory Board in the Sargent Report. Agricultural primary schools have been in existence for many years in Bombay, and so have basic schools in which spinning has been taught as the principal handicraft. Such schools will be increased in number and other crafts like carpentry, weaving and market gardening will be introduced to suit the environment of each school.

The vocational emphasis will also be extended to secondary education. There are already two technical schools in the province and the post-war plan provides for two more of these, so that there may be one in each Educational Division. The four existing agricultural high schools are to be increased to eight.

Industrial schools are proposed for Satara, Hubli and Bijapur, and advantage will be taken of the numerous technical training centres which have been started in many parts of the province for war purposes. One of the chief functions of these centres will no doubt be to accustom those who have become war technicians to the different kinds of machinery used in peace-time industry and thus help demobilized soldiers to find employment in civil life.

In the higher stages of practical education it is intended to introduce a degree course in textile engineering at the V. J. T. Institute, Bombay, and to reorganize the R. C. Technical Institute at Ahmedabad by providing four-year courses in spinning and weaving and other subjects that are likely to prove useful in a big textile centre.

Australian Woollen Manufactures

Tariff Board Findings on Effects of War

ON 4th April 1944, the Minister for Trade and Customs, Commonwealth of Australia, referred to the Tariff Board for inquiry and report several questions relating to the production in Australia of woven wool piecegoods during the period of the existing state of war. The questions covered by the Minister's reference were made the subject of a public inquiry by the Board, and evidence was tendered by the representatives of the retailers, master tailors, distributors of cloth, wool textile manufacturers, the Federal Clothing and Textile Advisory Council, The Textile Workers' Union, and several Government departments.

The questions referred to the Tariff Board and the latter's findings based on the evidence collected by them are summarized below:—

Tariff Board Findings

Question (a)—What changes have taken place in the quality of worsted and woollen cloths produced by Australian textile mills ?

(1) A number of different classes of cloth with a range of qualities and prices within each class, suitable for and, before the war, widely used in different sections of the clothing trade, are now being produced.

(2) Production of the highest prices and highest quality worsted and woollen cloths produced prior to the control is not now being permitted.

(3) Cloths of quality unsuitable for use at any price which were, before the war, produced in Australia in small proportion of the total manufactured are now, as the result of control, produced, if at all, in negligible quantities.

Question (b)—To what extent are worsted and woollen cloths being produced of a quality inferior to the highest quality permitted by the Control of Woollens Order made under the National Security (General) Regulations ?

(1) The control exercised over the quality of woollen and worsted cloths is elastic, the object being to secure from each mill the largest output of the types and qualities it can best produce.

(2) Cloths produced by different mills and marketed under the same designation and at the same selling price sometimes vary slightly in quality. None of the variations, however, shows a greater departure from the highest approved quality for the particular cloth than is, in the opinion of the Controller of Woollens, justifiable.

Question (c)—How effective is the existing system of control of the production of wool textiles, both piecegoods and yarns, in preventing the manufacture of cloths of unduly low quality ?

(1) The evidence indicates that the Controller of Woollens has effectively used his control over the production of both piecegoods and yarns to prevent the manufacture of cloths of unduly low quality, i.e., cloths unsuitable for use at any price. No evidence was received of production at present of such cloths.

(2) The quality of the best cloths now being produced is lower than is desirable for the requirements of a substantial section of the community, having regard to the facts that—

(i) they do not give the wear contemplated by the Rationing Commission when fixing the clothing ration scale; and

(ii) their use involves waste of labour for making up and limited supplies of linings and trimmings.

Question (d)—What measures are necessary and desirable to maintain or improve the quality of wool piecegoods produced in Australia—

(1) by permitting the manufacture of cloths higher in quality than the maximum quality prescribed in the Control of Woollens Order.

(1) A small surplus now exists of manufacturing capacity over the combined needs of the services and the rationed clothing requirements of civilians.

(2) Part of this surplus must be devoted to the manufacture of woollen cloths to replace scarce cotton and other cloths, and another part to filling of such export orders as may be approved by the Government.

(3) The Controller of Woollens should, at his discretion, direct the use of the

existing surplus manufacturing capacity for civilian needs, and also any such surplus that may occur from time to time in the future to improvements in quality in preference to the building up of stocks of piecegoods of current quality.

(4) Any improvement that can be made in quality by utilizing surplus capacity and/or by reducing production where this can be done should be spread over the greatest quantity of cloth rather than be concentrated on the production of a small quantity of high grade cloth.

(5) In any action on the foregoing lines, the Controller of Woollens should have regard to the following:—

(*a*) The requirements of the Rationing authorities;

(*b*) The fixing, by the Prices Commissioner in accordance with his usual practice, of maximum prices for improved cloths, prices so fixed, if higher than those now ruling, will not constitute a breach of the Prices Stabilization policy;

(*c*) The fact that the man-power available to the industry in the near future will not exceed the numbers employed in November 1943, and may even be less.

(2) **By improving the quality of the cloths now produced which are below that standard.**

No measures are necessary or desirable to improve qualities by this means.

(3) **Or otherwise.**

Opinions were expressed by witnesses in favour of legislation to enforce the branding of fabrics in such a way as to indicate their quality and the materials from which they are made. Since such proposals are already under consideration by appropriate governmental authorities, the Board did not further examine them.

War-time Changes in the Industry

Prior to the war, the Australian Tariff Board conducted several inquiries into the woollen textile industry in connection with the question of duties under the Customs Tariff. The most recent of these inquiries was held in 1937 and covered wool tops, yarns, piecegoods and blankets. In 1941-42 the Board made a survey of the Woollen Textile Industry on behalf of the Minister for War Organization of Industry.

With the outbreak of war, enormous demands fell on the industry to supply the needs of Australian and Allied Services in Australia and overseas. The industry was, in due course, placed under the control of the Department of Supply and Development, and supplies for civilians were heavily curtailed. Close co-operation between the department and the industry resulted in a great increase of production by means of:—

(*a*) Installation of new plant;

(*b*) More continuous operation of plant;

(*c*) Standardization of yarns and weaves for Defence fabrics;

(*d*) Introduction and extension of shift work, and/or overtime.

By the end of 1941, production had been increased and the Department of Supply and Development estimated that, after Service demands had been met in 1942, there would be available for civil needs:—

Worsted yarn	9,037,000 lbs.
Woollen „	4,405,000 „
Total ..	13,442,000 lbs.

compared with 31,621,000 lbs. used before the war.

Mr. R. J. Vicars, now Controller of Woollens, Department of Supply and Shipping, and then Textile Adviser to the same Department (then known as the Department of Supply and Development), informed the Board that early in 1942, the production for civil use was only 184,000 lin. yds. of cloth, including blankets, per week, compared with purchases at the rate of 440,000 lin. yds. before the war. He also estimated that, early in 1942, 560,000 lin. yds. a week were being purchased by civilians with consequent heavy depletion of stocks. Further, yarn production for machine knitting had fallen to an average of 52,000 lbs. weekly against a pre-war usage of 116,000 lbs.

Consultations between Commonwealth Departments and the industry led, on 1st April, 1942, to the publication of the Control of Woven Woollen Materials (Civil Needs) Order. This Order empowered the Minister for Trade and Customs to determine the types and the quantities of each class of woollen goods that should be produced, and to direct the distribution of such goods; the control of manufacture was vested in the Minister for Supply and Development. On 24th May 1943, the Minister for Trade and Customs delegated his powers of determining types and quantities to be produced to the Controller of Woollens, who was already, on behalf of the Department of Supply and Development, controlling manufacture. On 28th June 1943, those clauses of the Order conferring on the Minister for Trade and Customs the power of controlling distribution were repealed, as also was a clause empowering the prohibition of the use of trade marks or brands on woollen materials. Though in existence for over a year this last mentioned power had never been exercised.

Immediately on the issue of the Control of Woven Woollen Materials (Civil Needs) Order, the Controller of Woollens took steps to increase the quantity of cloth produced for civil use. Up to that time, the standardization of yarns and weaves had been applied with great effect, but only to Defence cloths. It was considered inadvisable to apply the same measure to civil production, since, because the equipment of mills differed, it would be likely to result in reducing rather than increasing production. The Controller, however, sought the co-operation of manufacturers to eliminate all types of construction that would hinder production. The use of more than one colour in the weft and of elaborate patterning was banned, and mills were required to concentrate on long runs, instead of producing small quantities as was done pre-war in order to supply demand for variety. In general, however, mills were allowed to continue the production of cloths as similar in nature as possible to those normally produced because in that way, maximum quantity could be made.

The extreme shortage of yarn described above, led to the banning of "two-fold weft" yarn in the manufacture of worsted cloths since, according to the Controller of Woollens, tests showed that the production of two-fold yarn required two and half times the man-hours used in the manufacture of an equivalent quantity of "single fold" weft yarn.

The range of materials and qualities which mills were permitted to produce was based on a schedule which was submitted to Production Executive but which, however, was never made the subject of a statutory order. Thus manufacturers were required by the Controller of Woollens to manufacture to prices which precluded the production of the most expensive grades in each variety. Subsequently, Prices Regulation Order No. 1150 of 3rd August 1943, prescribed the maximum prices to be charged for various classes of cloths.

At the time of the introduction of clothes rationing (mid-1942), it was found that the production of cloths for civil use, excluding blankets, had risen to 252,000 lin. yds. a week, whereas the estimated quantity needed to meet coupons was 340,000 lin. yds. excluding blankets. Similarly, though machine knitting yarn production had been increased from 52,000 to 60,000 lbs. a week, coupon requirements of garments were expected to amount to about 120,000 lbs. Shortages remained acute through the winter of 1943, but from July of that year the demand of the Services began to slacken, partly because of the movement of troops to the tropics. In August 1943, production of cloth for civilians increased to 493,000 lin. yds. a week against estimated rationing requirements of 340,000 lin. yds.

Manufacturers were then informed by the Controller of Woollens that some slight relaxation could be made in types and patterns, provided discretion was exercised. Shortly afterwards the Controller of Woollens made a proposal to the Director of Clothing and Textiles that mills should be permitted to produce for civilian use better grade cloths to the extent of one-sixth of the total output. Considerable discussion on the proposal ensued and the matter was ultimately referred to the Tariff Board by direction of Production Executive.

According to recent estimates made by the Rationing Commission, the present position regarding production and demand is as under:—

	Million sq. yards per annum
Pre-war consumption of cloths.	30.6
Present estimated rationing requirements	27.8
Approximate rate of production	33

The witness representing the Rationing Commission said that no great exactness can be claimed for the estimate of rationing requirements, particularly when an attempt is made to divide the total into different classes of cloth. If that estimate be accepted, a margin of about 5 million square yards is shown. Production of worsted cloths is, however, not in excess of requirements, and stocks have fallen to a dangerously low level. Some 3 million square yards of the margin is taken up by manufacturing cloths to replace cotton cloths now in very short supply, and orders for export have been accepted, or are under consideration, that could heavily exceed the residual capacity. The witness representing the Man-power Directorate expressed the opinion that it might sometimes be advantageous to export woollen cloths in exchange for cotton cloths that are in even shorter supply.

New Shrinkproof, Mothproof Woollen Fabric

RECENT developments of shrinkproof, mothproof woollen fabric would mean a big improvement in civilian clothing in the post-war period, the Chairman of the Australian Wool Board (Mr. D. T. Boyd) said. He added that at present the services were getting the principal benefit of the improved fabric.

This development follows the discovery by a European chemist who noticed that green materials never became moth eaten. He traced this to a certain dye which was being used in the production of green colour. Considerable research has resulted in several colourless products which can impart mothproof properties to wool. These products are simply added to the dyeing bath.

Astonishing changes are forecast in types of fabrics for the post-war world—materials of completely new appearance and holding new combinations of qualities. One Bradford authority tells of a wool material which will be neither worsted nor woollen but somewhere between the two. Woollen sheets, practically indistinguishable from cotton or linen except for additional warmth, will be available. Woollen materials to which sheen has been imparted will rival the finest silks and satins.

Health Insurance For Industrial Workers

Scheme Placed Before the Government of India

FOR the first time in the history of Indian labour a scheme of health insurance for industrial workers has been placed before the public and the Government. The scheme has been prepared by Prof. B. P. Adarkar, officer on special duty in the Labour Department and member, Labour Investigation Committee, Government of India. It will cost Rs. 2½ crores a year and is intended to provide security of income during sickness and cure and prevention of disease.

The Royal Commission on Labour had strongly emphasized the need for a scheme for providing medical care and income security during sickness to industrial workers. Prof. Adarkar was appointed to prepare the scheme in pursuance of the decisions of a series of Ministerial Labour Conferences and the Tripartite Labour Conference. The author was assisted in his task by a Panel of Advisers representing employers' and workers' associations and consisting of Sir Shri Ram, Mr. Kasturbhai Lalbhai, Mr. J. C. Lancashire, Mr. J. M. Garrie, Mr. A. H. Bishop, Mr. S. C. Joshi, Mr. S. S. Mirajkar, Mr. V. M. Tarkunde and Mr. G. Lobo. He was also assisted by an Actuarial Advisory Committee consisting of Mr. L. S. Vaidyanathan (*Chairman*), Mr. S. N. Vaidya, and Mr. B. K. Shah.

The scheme is both compulsory and contributory and applies, in the first instance, to three groups of factory industries, namely, textiles, engineering and minerals and metals—covering nearly 60 per cent. of factory workers or about 12 lakhs of workers out of a total of some 20 lakhs. In due course, it will be extended to other industries. There will be some "scheduled exceptions" where the scheme will not apply.

The employers' contribution will be Re. 1-4 per month per worker, while the workers' contribution will be respectively As. 12, As. 8, and As. 4, according as the worker belongs to the category of permanent, temporary or casual. Although in pursuance of earlier decisions of Labour Conferences and Governments, the contribution is bipartite, Prof. Adarkar has strongly urged Government participation in the scheme and made an alternative recommendation that the State in India should contribute As. 8 per worker, of which the Government of India should contribute As. 2 and Provincial Governments As. 6. Correspondingly, he has suggested a relief of As. 6 for employers and As. 2 for workers in each category.

The total cost to Governments, if they contribute, will be about Rs. 72 lakhs a year (on the basis of 12 lakhs of workers), of which the Central Government will will have to pay Rs. 18 lakhs per annum, while provinces will have to pay the balance of Rs. 54 lakhs on a *pro rata* basis, according to the number of insured workers. The total budget of the scheme is expected to be about Rs. 252 lakhs per annum.

The employer will collect his own and the workers' contribution, and for this purpose the "stamped card system" prevalent in other countries will be adopted. As regards benefits, medical benefit, including free medical attendance and treatment, almost without limit, will be given. Cash benefit will be subject to certain conditions regarding "qualifying" and "waiting" periods. Additional benefits will be available at a later stage when the scheme is stabilized.

Administrative Machinery

The administrative machinery will consist of a statutory corporation, with a central board, a number of regional-provincial boards, and a network of local committees in industrial centres, with functions appropriate to each body.

The medical organization will be based mainly on the principle of a salaried medical service, although the panel system will prevail in certain limited number of cases. It is recommended that the medical organization should be largely independent so as to meet the special requirements of industrial workers and that to prevent laxity in certification there should be medical supervision and sick visitation. To deal with disputes and offences, judicial machinery has also been proposed in the report.

The report recommends that, in view of the comparative failure of the Maternity

Benefit Acts and of the Workmen's Compensation Act, and also in view of their great financial bearing upon health insurance, maternity benefit should be provided on an insurance basis in conjunction with health insurance, and the Workmen's Compensation Act should be scrapped and replaced by a scheme of insurance against industrial disability.

Prof. Adarkar, observes: "Health insurance is traditionally as well as organically the most important measure of social insurance. It attacks the twin giants of want and disease from amongst the five giants mentioned by Sir William Beveridge in his monumental report (the other three giants being ignorance, squalor and idleness). In India, where all these giants flourish unabatedly, the beginnings of social insurance date from the passing of the Workmen's Compensation Act and the various Maternity Benefit Acts, but both these measures fall short of the true ideal of social insurance. Of all the occupational and social risks covered by social insurance, that of sickness undoubtedly possesses the greatest social interest. And yet, in India, unfortunately, the proposal of health insurance has had a long and somewhat chequered history."

Government's Attitude

It is pointed out that the Government of India have not yet considered the report and are not committed to all the views expressed by Prof. Adarkar. They, however, are inclined to accept the opinion that sickness insurance should not be considered in isolation.

On this point Prof. Adarkar in his report observes that four assumptions are implicit in the successful adoption of a scheme of health insurance. These are (1) the early adoption of a scheme of unemployment insurance and the creation of new employment in the post-war period through a drive for national planning and development; (2) the establishment of a scheme of old age pensions; (3) the adoption and enforcement of certain "premedical" measures such as regulation of wages, rigorous enforcement of factory laws, housing, nutrition, education in health, and improvement of environmental hygiene, and (4) a national health drive. These measures, says Prof. Adarkar, are necessary to keep down the incidence of sickness to the minimum possible and to prevent the scheme from being saddled with burdens legitimately belonging to other aspects of social security.

One of his recommendations is that the position of foreign workers working in India will be subject to special rules, implying reciprocity and retaliation. Prof. Adarkar explained that Indians were excluded from similar schemes in certain countries and what he proposed was that foreign workers should be similarly excluded from the benefits of the Indian scheme too. The idea, he made it clear, was more one of reciprocity than of retaliation.

Public Regulation of Industries

Suggestion of the British Trade Union Congress

A call for the immediate transfer to public ownership of transport, fuel and power, and iron and steel industries is made in the British Trade Union Congress report on post-war reconstruction, issued recently.

The report says that public control is necessary in different ways and in varying degrees over the whole of the economic life.

"A large number of important industries immediately require some form of direct public regulation. In general this should be secured by setting up Industrial Boards in these industries, composed of representatives of workpeople and employers in equal proportion, and an impartial chairman and other independent members, appointed and paid by Government," says the report.

Industries for which some form of public regulation was necessary included cotton and woollen textiles, heavy chemicals, cement, rayon, soap and margarine non-ferrous metals, rubber processing, grain milling and tobacco ; mechanical, and electrical engineering, motor car manufacture, aircraft, railway locomotives and rolling stock and ship-building. There should continue to be Government control over the movement of capital in and out of the country, operations of the Bank of England and the lending policy of joint stocks banks.

To secure comprehensive planning of all forms of investment in accordance with national and social needs, a National Investment Board should be established with a surveying, planning and lending department, the report urges.

Foreign Trade in Fifth Year of War

Trends in 1943-44 Analysed

INDIA'S foreign trade showed a distinct improvement in 1943-44, the fifth financial year of war, over the preceding year during which our foreign trade had reached its lowest ebb since the outbreak of war. The outstanding features of the year were an increase in the total foreign trade of the country; increased favourable balance of trade; increase in trade with non-Empire countries; decline in the exports and increase in the imports of grains, pulses and flour; decline in the relative importance of manufactured articles as compared with raw materials and articles partly or wholly unmanufactured in the import trade; and slight increase in the relative importance of manufactured articles over raw materials and articles partly or wholly unmanufactured in the export trade.

Increase in Total Trade

The total foreign trade of British India increased from Rs. 305 crores in 1942-43 to Rs. 329 crores in 1943-44, an increase of Rs. 24 crores as compared with 1942-43 and of Rs. 8 crores as compared with 1938-39. It may be noted, however, that these statistics do not include either the value of imports and exports on Defence account, or the value of transactions under Lease-Lend, and, therefore, do not account for the entire volume of goods imported into or exported from the country. The volume of trade covered by the excluded items may, however, be presumed to have increased considerably during the year under review.

The total exports of Indian merchandise on private account from British India expanded to Rs. 199.2 crores in 1943-44 as compared with Rs. 187.6 crores in 1942-43, being an increase of 6 per cent. over last year, while the total imports of foreign merchandise into British India increased by Rs. 8.4 crores or 8 per cent. from Rs. 110.4 crores in 1942-43 to Rs. 118.8 crores during the year under review. The balance of trade in merchandise (private) of British India continued to be favourable to India. In 1943-44 it was favourable to the extent of Rs. 91.4 crores as against a favourable balance of Rs. 84.4 crores in 1942-43, and of Rs. 17.4 crores in the pre-war year, 1938-39.

Import Trend Analysed : Food Articles

Imports under Group I, viz., "Food, drink and tobacco," which had declined to the extent of about Rs. 20 crores during 1942-43, due mainly to the cessation of imports of rice from Burma, increased from Rs. 7,62 lakhs in that year to Rs. 8,13 lakhs in 1943-44. This increase was, however, not large enough to effect any significant change in the relative importance of this group, which continued to be about 7 per cent. of the total imports into British India. Attention may, however, be drawn to one item in this group, viz., "Grain, pulse and flour" whose imports increased by Rs. 1,17 lakhs from Rs. 31 lakhs in 1942-43 to Rs. 1,48 lakhs in 1943-44.

Increase in Raw Materials Imports

Imports under Group II, viz., "Raw materials and produce and articles mainly unmanufactured," also increased by Rs. 11,98 lakhs to Rs. 63,94 lakhs in 1943-44. It will be recalled that until 1941-42 the value of raw material imports was less than that of imports of manufactured articles but in 1942-43 the position was reversed. In that year, raw material imports constituted nearly 50 per cent. of the total imports as against 29 per cent. in 1941-42. This tendency was further developed in 1943-44, when the value of imports under Group II increased to Rs. 63,94 lakhs from Rs. 51,96 lakhs in 1942-43 and constituted 54 per cent. of total imports as against 47 per cent. in the previous year. The item in this group whose imports increased during the year as compared to the previous year were oils (vegetable, mineral and animal) whose imports increased from Rs. 27,79 lakhs to Rs. 36,33 lakhs; cotton (raw and waste) whose imports increased from Rs. 15,42 lakhs to Rs. 17,53 lakhs; raw wool whose imports increased from Rs. 2,95 lakhs to Rs. 4,02 lakhs and non-metallic mining and quarry products other than coal whose imports increased from Rs. 1,89 lakhs to Rs. 3,31 lakhs. An important item whose imports decreased in 1943-44 was "seeds," the fall in imports amounting to Rs. 1,04 lakhs from Rs. 2,27 lakhs in 1942-43 to Rs. 1,23 lakhs during the year.

Decline in Imports of Manufactures

The value of imports under Group III, viz., "Articles wholly or mainly manufactured," particularly in respect of the more important articles in this group, further declined in 1943-44. The total value of imports under this group decreased from Rs. 49,51 lakhs in 1942-43 or 45 per cent. of total imports into India during the year, to Rs. 45,11 lakhs in 1943-44 or 38 per cent. of the total imports. The items which showed the most significant declines were "Vehicles" from Rs. 5,71 lakhs to Rs. 1,27 lakhs; "Metals" (including iron and steel) from Rs. 6,13 lakhs to Rs. 4,13 lakhs; and "Paper, paste board and stationery" from Rs. 2,16 lakhs to Rs. 1,97 lakhs. Certain other items showed an increase, e.g., "Dyes and colours" from Rs. 5,43 lakhs to Rs. 8,38 lakhs; "Chemicals, drugs and medicines" from Rs. 6,38 lakhs to Rs. 7,26 lakhs; and "Machinery" from Rs. 10,53 lakhs to Rs. 11,39 lakhs.

Exports of Raw Materials Also Increased

Exports under Group II, viz., "Raw materials and produce and articles mainly unmanufactured" also increased from Rs. 42,76 lakhs in 1942-43 to Rs. 44,64 lakhs in 1943-44, i.e., by Rs. 1,88 lakhs, whereas they had declined in 1942-43 by about Rs. 22 crores. In this group, the principal increases in exports were recorded under the following heads: cotton (raw) from Rs. 5,31 lakhs in 1942-43 to Rs. 7,49 lakhs in 1943-44; raw hides and skins from Rs. 3,38 lakhs to Rs. 4,12 lakhs; and seeds from Rs. 10,52 lakhs to Rs. 11,16 lakhs. On the other hand, exports of raw jute were reduced from Rs. 9,02 lakhs in 1942-43 to

Rs. 8,32 lakhs in 1943-44, and those of oils and oilcakes from Rs. 1,98 lakhs to Rs. 98 lakhs.

Increase in the Value of Manufactures Exported

The increase in the value of exports under Group III from Rs. 95,37 lakhs in 1942-43 to Rs. 104,60 lakhs in 1943-44, i.e., by Rs. 9,23 lakhs is significant as this group consists mainly of manufactured articles and indicates the growing dependence since the outbreak of war of certain countries on India for their requirements of such commodities. While the exports of certain articles like jute manufactures, woollen manufactures, chemicals, machinery, rubber manufactures, and metals other than iron and steel, increased, a few important items suffered a reduction, for instance, cotton yarns and manufactures from Rs. 46,19 lakhs in 1942-43 to Rs. 42,48 lakhs in 1943-44; hides and skins from Rs. 4,76 lakhs to Rs. 4,37 lakhs and iron and steel from Rs. 1,45 lakhs to Rs. 1,05 lakhs. Another feature of the export trade during the year was that the relative importance of the main groups underwent little change except that the share of Group III consisting of manufactured articles in the total exports showed a slight increase.

Foreign Countries Increase Their Share

As regards the direction of trade, while the share of the Empire countries in the import trade of British India in 1943-44 declined by Rs. 4,24 lakhs as compared with the preceding year, that of foreign countries increased by Rs. 12,65 lakhs. On the export side also non-Empire countries took a greater share of the increase in India's exports. There was a substantial increase in imports from Australia, but Canada's share in the import trade was reduced from Rs. 5,53 lakhs in 1942-43 to Rs. 2,52 lakhs in 1943-44. The increase in imports from non-Empire countries was mainly due to higher receipts from Iran, Iraq and Egypt. On the export side, the United States, whose share increased by Rs. 12,49 lakhs over the previous year, largely accounted for the increased offtake by non-Empire countries, while amongst the Empire countries the largest increase was recorded in the exports to the United Kingdom, which were higher by Rs. 2,87 lakhs than in the previous year.

British Cotton Industry

Government's Plans to Meet World Competition

THE British Government's plans for directing the re-establishment of the cotton industry to meet world competition after the war are announced. To avoid the danger of continuation of the pre-war shrinkage of output, exports and employment—" which would be a disaster to Lancashire and Britain"—the Government urges the industry to take immediate steps to put the following five-point programme into operation :—

(1) To bring about such amalgamations, particularly in the spinning section, as are required to secure efficient and financially strong units. (2) To undertake the necessary re-equipment so that in respect of machinery, buildings and amenities the industry will be second to none. (3) To overhaul the merchanting organization particularly with a view to enabling the producing sections to achieve great economies of continuous runs and bulk production. (4) To modify and simplify the wage structure of the industry. (5) To extend double-shift working without which the expense of installing modern machinery in many cases would not be justified.

" Unless the industry will face these questions in a bold and practical spirit there can be no satisfactory guarantee of stable prices, production or employment," said Mr. Hugh Dalton, President of the Board of Trade. The Government reject the plea urged by all sections of the industry for a system of statutory minimum prices. They say that there are grave dangers in such arrangements which might easily lead to restriction rather than expansion of output and to a perpetuation of the inefficient and old-fashioned methods by some firms.

In the home market, the problems would be to enforce not minimum but maximum prices so as to prevent inflation, and in overseas markets the need would be for discretion on the part of exporters; control must continue for a considerable time after the war, and when it disappeared the Cotton Industry (Reorganization) Act of 1939 would come into operation.

Disclosing the proposals to the Cotton Board Post-war Problems Committee, Mr. Dalton told the members he hoped the whole industry would lose no time in putting them into effect. After the meeting, he said he had informed the meeting that the Cotton Board would continue its work on its present lines after the war until under the 1939 Act a new Board with extended powers would be set up.

Commenting on the Government's proposals, Sir Raymond Streat, Chairman of the Cotton Board, said he was sure they would be the subject of a very hot debate in the industry.

Cotton Spinning 9

Arrival of Cotton at the Mill

By JAMES H. DAWSON, F.T.I.

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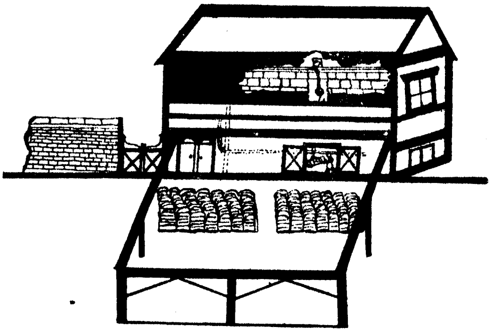
THE arrival of the cotton at the mill and its reception *there* is of itself a much more important event than may appear to many observers.

The *inside management* of the mill starts when the bales arrive there. Such bales will come from the rail depot or other receiving terminus ; and upon arrival at the mill, they are very often indiscriminately pitched off the trucks or lorries on to the ground in front of the cotton-godown or warehouse. In many cases such bales are allowed to remain outside in the open-air for a much longer period than is good practice. In rainy weather they get soaking wet, and in the very hot weather they get " bone dry." This is a very bad system and should be avoided. If the cotton godown is built with a projecting wood cover-like or shed top arrangement, under which a few truck loads of bales may lie comfortably sheltered until they could be removed to the godown the aforementioned evil is overcome. The cotton godown should be provided with a travelling crane, which from a "cat-head" projecting into the mill yard could pick-up the bales from the lorry or from the outside ground, run them into the godown, and traverse all round it, so that the bales may be placed in position wherever it is desired to stock them. It is customary that every bale should be weighed and ticketed before leaving the sellers' warehouse. The tickets must notify the " mark " of the cotton, the " consecutive number," the weight of the bale, and the number of bands or garth irons. These particulars are then included in the invoicing particulars and every bale may then be weighed separately as it is being " hoisted in," and the bands counted in order to " tick off " the delivery note and the invoice, a convenient platform scale being provided. Afterwards as the bales are removed from the godown and taken in to the mixing loom for use, the tickets are taken from the bales and filed, until the end of the days' work, when they can be taken into the office, where the " numbers " of the bales mixed are "ticked off" in the office book kept for that purpose, wherein the numbers of the bales, their respective weights, and numbers of bands have been entered (copied from the advice notes received in advance from the cotton broker). By these and similar means a check is kept upon all cotton received and warehoused. When afterwards the bales are mixed in a stack mixing or (in cases where stack mixings are not made) when each bale is opened and laid alongside the bale breaking machine, the abovementioned tickets are taken off the tare or wrapping and filed, ready for transference into the office at the end of the day's work.



We have already mentioned the advisability of the use of a " trolly crane " with a " cat-head " extending outside the cotton godown. The use of this, to facilitate the unloading of the bales and their removal into the godown is invaluable. The employment of mechanical labour in connection with this department, however, should not end as soon as the bales are under cover.

The godown should be built as high as reasonably possible, bearing in mind the number of bales it is expected to house. Fixed to the roof girders inside, in the correct position for carrying a set of travelling pulley blocks, should be a line of steel rails completely encircling the building. As the bales are "landed" inside the godown, they can be packed up easily, carried by the travelling pulley block, and conveyed to the desired position for the stack of that particular "mark." In this manner the bales can be "stacked" wherever required ; the height of the stack is controlled only by the underside of the roof girders. The return in the labour-saving and convenience of this system is well worth the little extra expense incurred in the first cost of the building. Further, advantage can be taken of this system when the blowing room is situated in close proximity to the cotton godown. In many instances known to the writer, the cotton godown is separated from the blowing room by a brick wall only, and there is a suitably sized door leading from one to the other. Labour-saving is again introduced by means of a pair of blocks and pulleys, and a rail which reaches from end to end of the godown, fixed upon the pillars down the length of the room. This rail enters the doorway of the blowing room, passing along to the side of the bale-breaking machine. To pick up a bale from the floor near the stack, to carry it along and to lay it alongside the bale breaker is a matter of a few minutes only for one man. It is usual in this case to sample the bales whilst upon the truck, previous to running them out of the bale storeroom; by breaking one or two bands off, and drawing a sample from the middle of the bale, a sample also from the top and bottom sides of the bale are also usually taken.

When a stack mixing is made, the sampling is done as the bale is opened near the stack and the top and bottom sides, as well as the "inside," can be easily examined. The question of feeding direct from the bales supplied to the bale breaker, as above explained, or feeding from a "stack" which is first built up from a given number of bales is a question of choice, each system having its supporters.

Having now got our cotton into the godown, we follow on to the first of the inside processes. We must *mix* the cotton from the various bales in order to obtain the best results. When the bales are transferred from the cotton godown for the mixing operation it will not suffice that we should commence and bring bale after bale into the cotton chamber or mixing room and have them mixed without guidance or system. All the bales should be sampled first if possible. Suppose we intend making a "stack mixing." A stack mixing is where the cotton is piled up into a stack, layer upon layer, and well-trodden down. If the space available for our stack is capable of receiving, say, 50 bales, then the 50 bales intended for such use should be examined by sampling both sides. This can be done by cutting a slit in the wrapper and withdrawing a good handful of cotton therefrom. Even if the 50 bales are all one "mark" they will vary more or less in the qualities previously described.

Some years ago the system was to truck the bales from the godown, and lay them down in position for sampling conveniently near where the stack was to be made. Layer after layer was stripped from the bulk of each bale, and pulled into pieces (always supposedly small, but often not small enough for the carding master's satisfaction).

When the cotton had to be used it was torn away from the bulk, or stack and passed on to the next process.

The Opening Machines

In many cases these machines were some distance away from the mixing room and the cotton had to be conveyed to the openers by manual labour. Systems of mechanical conveyance are now in general use, and the mixing of cottons in these days is quite a different proposition compared with what it was some time ago. Nowadays it is necessary to have some idea of the uses of "beaters" and "fans" before we get to the blowing room stage proper, in order to follow the mixing room processes. We have just hinted that it is nowadays necessary to have a good knowledge of beaters and fans in order to be able to follow the mixing room processes. It is quite as necessary that we should understand *that there is a necessity of "mixing,"* otherwise the modern process which involves the necessity of knowledge of beaters and fans would stultify the advantages of the process. Certainly cotton mixing has become revolutionized, owing to the introduction and aid of mechanical means. It is in the mixing room where the key to the whole situation of a successful cotton spinning concern lies. This does not mean that the only thing that matters is to reduce the cost of the mixing, although this is often erroneously quoted as being one of the principal objects of mixing. Certainly it is one of the objects in specified cases. We would venture the suggestion that the principal object of " cotton mixing " at the mill is to remove as far as possible the *damage done* by the mixing of cotton before the spinner gets it. If the cotton was not so well mixed when it arrives at the warehouses in Liverpool, Manchester, and other cotton receiving centres, there would be less necessity for mixing it well in the mills of Oldham and Rochdale and other cotton spinning centres.

In previous instalments the writer has pointed out how it is impossible to grow cotton fibres *anywhere* which are regular in length of staple. How even upon the same individual seed the staple lengths and their diameters vary considerably. The differences in the length and thickness of fibres, however, are only two of the variations found in the cotton when *baled.* We get differences in the cleanliness, and even in the nature or composition of the " foreign matter " which is responsible for the uncleanliness. We get differences in the shade, and the shades vary so much in many instances that we may refer to differences in colour. We get " spotted cotton," and " stained cotton," and different colours of spots and stains ; some stains are oily from crushed seeds, others are caused by chemical reaction owing to the use of fertilizers. Some are caused by spraying the plants to kill off boll-weevil or any similar pest; while others are caused by excessive rainfall, when the bolls are open. Some cotton, which is supposed to be white, may vary from a creamy or natural colour to " blue," which is a type of white inclined to look " bluish." The blue may be likened to an overbleached white, when too much blue has been used in the liquor. What is known as a natural colour should be a nice very light cream. Between these two extremes we have all the variations between good " bloom " or " blush " to dead or dull white.

The creamy cotton with plenty of bloom is apt to " run-off " until we get what is known as " buttery " cotton, which sometimes assumes a light brown colour; this would then be described as " tinted." Even if colour, cleanliness, and length of staple were satisfactory, we could have other variations.

Curly cotton, or stringy cotton, caused in the ginning process, may be present in some bales, more than in others ; as also may " *gin-cut* " cotton, which is caused in many cases by the same defects in the gin, the difference being that the gin-cut cotton was ginned when *dry,* and the stringy cotton was ginned when *damp* or *even wet,* and in that condition the effect of overloading the gin, bad setting of the saws, and gin breast, would be to roll up the fibres into a " stringy " mass, rather than to " cut " them or break them. With the stringy cotton, therefore, we may expect damp cotton. Two other extremes are " *green cotton* " and " *mossy cotton.*"

Mossy cotton is caused principally by the presence therein of an excessive proportion of short and immature fibres ; such as may easily accrue from the seeds being stripped too bare in ginning, or adulteration by an admixture of linters.

Green cotton may, on the other hand, be all right in staple quality, but may lack the mellowing influence of age.

New crop cottons, " first pickings," are in this category. It is not suggested that all these faults in cottons come in every consignment, but there are numerous combinations of circumstances which make almost anything possible.

First of all, there is the fact that some plantations cover a very large area. Some of the land upon the foothills, or the rising ground, is, therefore, well drained ; other parts of the estate may lie in the " bottoms " near the river. There would be a vast difference in the product of such lands even from the same class of seed. The crop gathered therefrom would all be ginned and baled together ; just as all the sheaves of wheat, or oats, from one farm would be " thrashed," and the resultant grain bagged up together. This happens on large estates, where they have their own ginnery and compress plants. In other instances a group of smaller planters will have to co-operate in the use of one ginning plant and compress. The possible mixing of different growths in these cases is obvious. As the seed cotton is being brought in day by day, the ginners will be constantly moving it out again, seed and lint separated. These people do not consider the *cotton* from the spinner's point of view. Their chief concerns are, first, the yield of seed cotton per acre of land planted; secondly, the weight of lint per ton of seed picked and ginned. There are also other people who do not consider the spinner. These are the "growers" of the "*city-crop*"; the dealers in "*specks*" and those who handle "*no mark*" cotton.

The "city crop" is made up of the old samples, "redraws" and pickings or sweepings from the floors in the warehouses, sale-rooms, etc. "Specks" are lots of cotton purchased with a view to resale. "No-mark" cotton is comprised of bales from which the original markings have been obliterated or labels of transport marks missing. In all these cases there are dangers that some of these bales may get among other lots and made to look like them outwardly.

It will be seen that one of the principal objects of mixing cotton at the mill must be to get as good an average as possible from the consignment which has to be dealt with. There are always variations more or less in lots of cottons and it will not suffice that we commence to use a lot of cotton and run it into work, passing it through the machinery, bale after bale. Hence we *must* mix, and the "stack mixing" must be properly made, *and afterwards properly used*, in the surest manner possible. We must explain "properly used." We should explain *first*, however, the building of a stack mixing of cotton; because the correct building of the same makes it more difficult to use it correctly.

First, a number of bales are opened, comprised of a definite number from each "mark" or lot which are to form the bulk. There may be 6 or 8 men to make the mixing. A couple of these men, will "throw on"; that is, they will take a layer from each bale, and throw same upon the space where the stack has to rise. The half dozen men will take up the layers and pull them into suitable sizes, pieces, and spread them around. As the layers increase in number, the stack commences to take shape, and the bulk of cotton rises in height. The six men on top, of course, are tramping about and around the rising stack until the arranged-for number of bales have been included. It can be understood that with all the pressure in building the stack it will be fairly solid. *That is the trouble.* When the stack has to be put into use the "*real mixing*" should commence. The one who has the job or duty of "feeding" from the stack, should pull the cotton from same, in a perpendicular fashion from top to bottom; in that way he gets cotton from every layer, and thus from every "mark."

However, to pull cotton in that fashion is hard work; and so, it often happens that it is removed, a portion of a layer after portion of layer, and fed thus into the machine, and to a certain extent, the object of mixing is by-passed. A similar negative result is obtained when the more modern methods of mixing are employed, and when the bale breaker is used.

In this system a number of the bales which are to be mixed are placed around the "bale breaker" in the required proportion of each mark. The man in charge of the machine always has definite instructions to "feed" the "hopper" of the bale breaker with layer after layer of equal thickness from each and every bale laid around the space behind the machine, and in the correct routine to ensure a proper blending of the "sorts." This system will prove satisfactory and the cotton will be properly mixed, and the size of the bales will diminish gradually and equally. It is not unusual, however, to catch the man with some of the bales half used, some scarcely touched, whilst other bales have disappeared altogether. Of course, the principles contained in the two systems of mixing stand good for our purpose, the failure of the human element to obey instructions is another subject, which should come more under the title of mill management than of "cotton spinning."

Suggestions for Improvement in Efficiency and Production

BY D. RADHAKRISHNAN, B.SC., L.T.M. (Bang.), and B. R. RUKMAJI RAO

(Specially Contributed)

THERE are two distinct factors to which we must bestow attention if greater efficiency and production are desired. These two factors are: (1) The Machine factor, (2) the Human factor. Any careless and haphazard handling of either or both is sure to have disastrous repercussions on efficiency and discipline. An intelligent and appreciative handling of the human factor, especially, is needed to traverse the "Path of the golden mean," avoiding either too much slackness or too much harshness, both of which have a tremendous bearing on the question of control of mill labour. Times have changed and correspondingly labour mentality has changed. We must always have now in view the psychological aspect in dealing with the human factor. The supervising departmental staff should have a clear understanding of this, and should meet any situation dealing with labour with consummate tact, commonsense and discretion. Such an appreciation of the situation will avert many an unhappy incident fraught with undesirable consequences. Broadly speaking, the supervising staff should know the crucial moments of when to "cajole" and when to "command."

We shall first deal with the human factor, and then we shall consider the machine factor. Extraction of the maximum efficiency and production out of a machine depends on two main factors: (1) the condition of the machine tenter, operating the machine and (2) perfect condition of the machine.

Maintenance of the perfect condition of the machinery rests on the supervising staff and the jobbers and fitters, each of whom should carry out his portion of the work honestly, diligently and painstakingly. This question could be dealt with afterwards by an enumeration of the duties to be carried out by each individual right from the head of the department to the oilman.

Human Factor

This factor exhibits the greatest variation and in dealing with each labourer, the supervisor should have in view the peculiarities and idiosyncrasies of that individual. Every supervisor should study each labourer under him in order to get an insight into the mentality of that individual. Then alone is he in a position to handle the labourer in question quite tactfully and to the best advantage of the parties. It is only then that he can know when to cajole and when to command. It has been our experience (at any rate with local labour) that too much familiarity is detrimental to proper enforcement of authority. It is true to say that familiarity breeds contempt. It is best for the staff to keep aloof from labourers in so far as personal matters are concerned. A little bit of "reserve" is to be cultivated whilst dealing with them. But this reserve should never be associated with harshness. On the contrary, it should always be tempered with a sense of fairness and sympathy.

A *disciplined* and *contented* labour force is the secret of efficiency. Please note that it must be both "disciplined" and "contented." One without the other tends to do more harm than good. Discipline is essential for smooth running of the departments; contentment is essential for extracting the maximum efficiency out of the workman. Psychology has abundantly proved that a discontented (mentally as well as physically) labourer cannot even put forth 50 per cent. of his normal efficiency. We suggest below a few things for enforcement of discipline, and a few things which may inculcate in the minds of the labourer a sense of contentment.

(1) Late coming should never be tolerated. Time office must be very strict about this, irrespective of the number of people who are defaulters. On many occasions, when a large number of workers have come late, time office sends word to deparmental head whether to open the

gates or not. If the late coming is countenanced by the departmental head with a view to decreasing the number of machines stopped, it sets a bad example for the late comers who sense a sort of weakness on the part of the staff. This policy is that of "pound foolish and penny wise." A strict enforcement of penalty against late comers will have a deterrent effect and after one or two days, there will be few or no late comers at all. What we lose by way of production due to idle machinery will amply be made up by the perennial gain got by regular attendance.

(2) Absence without leave. As per the standing orders, no workman is permitted to absent himself without leave and if he remains absent for more than a week, is liable to be discharged without notice. But this is not being strictly enforced. There are several habitual defaulters and the sooner such people are removed, the better. In fact, even if such people are given all their dues and emoluments and sent away, the mill does not stand to lose at all, because the effect produced on the others will be salutary.

(3) No person shall take more than 40 days' leave in a year (15 days' privilege leave and 25 days' ordinary leave) unless under special circumstances. If he does go on leave for more than 40 days, then he shall not be eligible for the yearly increments, etc.

(1) Every labourer during the night shift must be given one cake or biscuit and one cup of good tea between 12 p.m. and 2 a.m. This will have a tremendous effect on the workers. Such a distribution of cake and tea will have great beneficial effect on the worker both from the physiological as well as the psychological points of view. It breaks the monotony and gives relief to the tired worker. A sort of gratitude and contentment steal into his heart and he will work with doubled vigour. Only a person who has personal knowledge of the horrors of night shift could really appreciate the good effects produced by the distribution of a cup of tea.

(2) Every workman who puts in 6 days' attendance during the night shift week should be paid one anna attendance bonus per day. Even one day's default makes him lose this benefit.

Maintenance of machinery in good order. Machines could easily be kept in tip top condition when every member of the staff attends to his duties properly.

(1) *Departmental Head.*—(*a*) Going round the department and issuing of any instructions to his immediate assistants. (*b*) General inspection of the condition of the machinery. (*c*) Inquiries, if any, regarding misbehaviour on the part of his men. (*d*) Strict enforcement of the rules as per standing orders in respect of leave and other questions. There shall not be any deviations in this enforcement from department to department. (*e*) Any undue interference by one departmental head in the routine affairs of another departmental head should be avoided as far as possible, as this tends to dislocate the routine of that department and slackness may result therefrom. Any shortcomings may be indicated in writing by one departmental head to another. The shortcomings should immediately be attended to by the junior staff of that department under direct instructions from their head.

(2) *Assistant Masters and Supervisors.*—(*a*) Carrying out the orders of their superiors. (*b*) They should be in their departments at least ten minutes before the commencement of work. (*c*) They should attend to the requirements of the jobbers and assistants, and give them instructions. (*d*) They should be almost always on the spot and have an eye on the quality and quantity of the production. (*e*) Have an eye on the upkeep of the machinery. (*f*) Attend to leave and other questions. (*g*) They must be given such liberty of action as to settle amicably all ordinary questions and not bother the head of the department. Only serious matters may be brought to the notice of the departmental head.

Distribution of work among the Supervising Jobbers.—Head Jobbers.—(*a*) To go round the department and note if all the jobbers, fitters and oilmen are come. (*b*) To supervise and help overhauling of machines. (*c*) To give proper work to the general cleaning gang. (*d*) To check and replace worn-out parts of machines. (*e*) To recommend leave, etc., to the general shift workers. (*f*) To look after the arrangements of the substitutes for jobbers or fitters, etc., on leave in the general shift. (*g*) General supervision of the department. (*h*) If the night-shift jobber goes on leave, to come to night shift for that week as per instructions from his superiors. (*i*) To note that he and the side jobbers will be held responsible for any lowering in efficiency or production.

Side Jobbers.—(*a*) Putting men on the machines. (*b*) Checking if machines are all right. (*c*) Whether supply from back process is adequate. If inadequate, to bring the same to the notice of the respective doffing jobbers. (*d*) To keep an eye on the oilmen whether they have properly oiled the machines. (*e*) If any repairs are needed, then to give instructions to the shift jobber. (*f*) To recommend leave, etc., to his men in his shift. (*g*) To supervise the work of doffing jobbers, oilmen and fitters. (*h*) To note he will be responsible for any lowering in efficiency or production.

Doffing Jobbers.—(*a*) To see to the attendance of the doffing boys. (*b*) To note the urgency of doffs in different counts and to arrange to supply the same as quickly as possible to the next process. (*c*) To help the machine tenters after each doffing. (*d*) Whilst doffing machines, to be present personally and to pay particular attention to the "colouring" of the doffs (each colour indicating a particular count) in order to avoid mixing of different counts. (*e*) To see that the department is kept clean by the sweepers and his boys.

Fitter.—(*a*) To attend to the repairs of machines under instructions of shift jobber. (*b*) To attend to idle spindles. (*c*) To effect changes of change wheels, etc., as per instructions. (*d*) To help the cleaning gang during gear cleaning and oiling of one frame daily.

Oilman.—(*a*) To see to oiling of machines properly twice a day as per times noted. (*b*) To attend to beltings.

We have detailed above some of the important factors which may go a long way in the establishment of good efficiency and production. Many of the observations made are the outcome of long experience.

Practical Points for Writers and Readers

MR. J. H. Yates, Weaving Master, Birla Cotton Mills, Delhi, writes :—

I have read several articles on picking, sley setting, shedding, etc., and am amused to find they are more or less copies of old text books, one of which I have with me, first published in 1894, with a few words altered here and there to make it read and sound a bit different, and destroying the principle. One article I read explained there was a bottom shaft, a boss fastened on it with a key, a picking plate bolted to the boss, a picking nose bolted to the picking plate, that this nose acts on a cone-shaped bowl revolving on a bush bolted to an upright shaft called the picking shaft, etc. My point is—why tell a line jobber all this when every power-loom weaver in India knows it? What a line jobber wants to know is—how to set these parts to obtain easy working, and maximum life with minimum wear and tear both on the loom parts and stores as well. Pick setting is a work of art, it carries its secrets and should be set both from a commercial and practical point of view. If wrongly set, both stores and coal bills can be affected. I would like to see writers give diagrams of pick-setting, also diagrams of how the shuttle will travel from box to box with such a setting, along with alternate settings, showing what effect they will have on the travel of the shuttle, also showing HOW and WHY such effect takes place. For instance, raising or lowering the picking bowl, showing its correct position, also how and why such position is arrived at, correct shape of picking nose too. This is what a line jobber wants to know, and not a variety of words which tend more to confuse, than help him. There are other items in picking and pick setting, more than what meets the average eye, but I have only mentioned a few. We must not forget the picking motion is always an expensive item to every manufacturer in many ways and should be carefully watched both from a stores point of view and other points as well, especially in fine yarns, high counts of reeds and picks; otherwise much cloth can be spoiled, waste increased, hence the manufacturers' loss, more work and less wages for the worker. Every different make of loom has its own peculiarities.

Good pick setting is the forerunner to good shuttle travelling.

Sley Setting

Another item is sley setting. Here we are given a variety of circles, arcs and lines drawn showing how to find the height of the sley. Now what can the average line jobber do with this lot? It only confuses him. Give him a new loom of a different maker he has not seen before, tell him to set the sley, show him how to draw the circles, etc., and where will he get to with it? What he does want is—a foolproof method, simple and easy to follow with any make of loom. In sley setting we have to watch how the shuttle enters the box, how it comes to rest in the box and how it leaves the box; otherwise we are labouring in vain and at a cost too. This cost is borne by the manufacturer in every way; besides weaver and line jobber suffer too. There are many things to see in sley setting which only a practical eye can detect, especially as in pick setting, in fine yarns, high reeds and picks, coarse counts can stand more strain as these are in low reeds and picks as a rule; for example, take a loom running, say, 20 or 30s warp in a 48 to 70 reed, with, say 20s or upto 40s weft, about 50 to 70 picks per inch, it will run easily and give no trouble in these low qualities. Now change over to 90s to 120s warp, 70s upto 140s weft, 90s to 120s reeds and 120 picks to the inch and see the difference in the running of the loom. What do we find? Perhaps weft breaking, weft catching in the box, leaving part picks in the cloth, weft marking in the box showing dark stains in the cloth, many warp threads breaking, especially at the selvedges in the higher picks, shuttles chipping or wood burning and wearing away rapidly, bad travelling, hence their effect on the weft and warp, all with the same sley setting. WHY? The writer has had this practical experience. To deal with coarse counts is an easy job, but to deal with fine yarns is a work of art. Fancy and art silk cloths have also to be considered for sley setting. I have just mentioned a few things at a glance; space does not permit me to go deeper. There is also the keenness of the shuttle on the reed and how to regulate it. This is more pronounced in the higher qualities of fine cloths and in certain makes of looms, more than others. One particular make of loom known to the writer is faulty for this but can be easily overcome. What the line jobber wants to know is a foolproof method in dealing quickly with all these matters, how to obtain a keen eye for defects. Take, for instance, two line jobbers with good education, working in the same mill, same looms *and equal* distribution of stores. One will work harder than the other, also consume more stores, and give no better results, perhaps worse. One will make a picking nose last months longer than the other, and give better results. Why? How many line jobbers know how to test a sley in the loom if it is twisted and how to effect a simple cure. What trouble this can cause, especially in the fine trade, to the line jobber! A sley cap can be twisted and cause endless trouble—shuttle smashes, weft and warp breakages. It can be easily detected and a simple cure can be effected in two minutes' time. Like everything else it is easy where one knows how, but what about the poor line jobber who does not; what a struggle it is for him! Sley setting and pick setting must work in harmony. A certain modern Lancashire mill, known to the writer, has all its sleys set out of all proportion to theory, for certain reasons. In my opinion, theory in many cases to-day has outlived its sphere of usefulness. Another important thing; a line jobber who cannot make a good shed is useless. Here again, he should be taught a foolproof method, simple and constructive. How many hours are lost by line jobbers playing about and altering looms one way and another, where only the shuttle is at fault.

Times are changing, the peoples of India are becoming more educated, and education demands a higher standard and quality of clothes to wear, same as in other countries. With this I fully agree. Now let us ask ourselves, who is to play a big part in the making of these better quality cloths. The line jobber, of course. A good set of line jobbers to a mill is a great asset.

What I would like to see, therefore, is—our writers giving us something original, something new, food for thought, something that will set our minds thinking in another direction in 1944, and not keep reviving the relics of ancient times.

Internal Audit in Cotton Textile Mills

By C. A. THAKKAR, B. Com. (Bom.), F.C.C.S. (Lon.),
Internal Auditor, Asarwa Mills, Ltd., Ahmedabad

(*Specially Contributed*)

INTERNAL audit may be considered an important branch of management in any modern complex business or industrial organization. It means intelligent scrutiny into the internal working of the factory. It is concerned with account-books primarily but as all mechanical operations are ultimately reflected in some form or another in the books (financial or statistical), internal audit may be regarded in its broadest sense as embracing all the processes in the factory. It examines production (actual and ideal) purchases and consumption of stores, cottons, wastes, fuel and costs of finished products. It aims at aiding the management in the work of controlling the staff, establishing proper internal control, and ensures a high degree of accuracy of the books. It examines the system of accounting obtaining in each department, finds out flaws and supplies correctives, eliminates all unnecessary duplication of work everywhere so that (only) necessary work may be done in minimum time, maintains proper co-ordination between various departments, meets the accounting needs of an expanding organization and effects all necessary adjustments. In short, he aims at introducting the most ideal and up-to-date system of work (under the conditions current in the factory) and to make it both fool-proof and knave-proof.

The internal auditor draws necessary forms for various departmental production reports or improves the existing forms so that the management get the correlated information at a glance, and the correct figure-picture of the working of the departments is reflected for their consideration and action.

Codifying Procedure

The internal auditor codifies and standardizes the correct procedure to be followed in the case of various operations of purchases, production, consumption, and sales of different raw and finished materials, and issues standing instructions to the staff and insists upon their observance. He considers the staffing of each department with a view to ascertaining whether it is overstaffed or understaffed. The success of any organization depends upon the extent to which responsibility can be traced up to the last man in the rear. The internal auditor recognizes this canon and aims at introducing clear-cut division of work and unequivocal allocation of duties to the various members of the staff. The internal auditor introduces modern time and labour-saving devices particularly for work of a mental nature. He tries to introduce automatic counter-checks and cross-controls in the forms of books so as to eliminate chances of fraud, small or big, innocent or otherwise, and to reduce the degree of pure reliance to be placed on the staff by the management. He establishes proper departmental checks. Above all, he exercises independent and occasional checks which have deterrent effects on the staff. He discovers all waste of man-power (i.e., clerical energy) and tries to set them right.

Helping Annual Audit

The internal auditor can also take up some of the work connected with the annual audit of the financial accounts, leaving little to be done by the company's auditors. When the work of this statutory audit is thus decreased, the amount of audit fee to be paid to the company's auditor can be substantially reduced. Again, the internal auditor can be appointed honorary local auditor to the co-operative societies which may have been promoted by the company for the welfare of its workers.

The internal auditor establishes proper working standards for all departments, finds averages, prepares monthly comparatives and balancing statements which would reflect the progress of the departments from time to time.

The internal auditor has got to be something of a psychologist, over and above possessing necessary academic proficiency. He should be an adept in the art of handling different frames of mind. He has to recognize that people

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Efficiency and Specialization in Post-war Reconstruction

BY B. M. BORKAR, L.T.M. (Hons.), *Spinning Superintendent, Bradbury and Phœnix Mills, Bombay*

(*Specially Contributed*)

IN the first session of the First All-India Textile Conference many schemes and projects were put forth by eminent technicians and speakers, but to my mind none suggested a feasible concrete scheme. Without any reservation on my part I should frankly admit that the present industrial system in India has apparently produced contented acquiescence rather than investigation and constructive schemes which could be put into actual practice. This state of affairs is not good on the face of it. It is said that industrialists, whose life is given up to business are by habit mindful of the future. Was anything solid achieved in particular in our first session of the first All-India Textile Conference, among so many things in general, regarding the advancement of technical efficiency and specialization pertaining to our textile industry? What is the place that efficiency and specialization are going to get in the post-war reconstruction of our textile industry? It is time to admit the blunt truth that we have so far failed pretty dismally on this point. There has been, in fact, too much talk and too little action on our part. Most of the decisions of the Conference, no doubt, would enable our managements in general to keep an effective check on labour and industry. While this is all to the good, no constructive scheme in general, and for efficiency and specialization in particular, was conspicuous and there is danger that the lack of such schemes might jeopardize the successful working of the technical aspect of the textile industry in the post-war period. The industry will have to face the difficult task of tackling the problems of industrial peace in the post-war period with redoubled vigour and skill. Our method and machinery should be completely overhauled for the rehabilitation of our textile industry so that we can really count and be proud of our industry as a real national economic asset!

Coming to our subject proper—Efficiency and Specialization—we see that men from the streets are recruited in our industry by jobbers and they—unskilled as they are—are placed on jobs where skill is required until such time that they become used to skilled work on those particular posts. Thus we see that a raw man is given the machine for handling without any previous knowledge of the machine he is going to handle. This state of affairs should be stopped in the interest of our industry's future. With due respect and regard for the existing conditions of machinery and man-power, we have introduced rationalization in our mills with best results. Why not adopt specialization and make it a success?

In my opinion post-war labour should be divided into two classes: skilled and unskilled. (1) Skilled, e.g., machine workers fitters, oilers and jobbers, etc. (2) Unskilled, e.g., coolies, hand feeders, sweepers, bobbin carriers, etc.

Recruitment should be adopted on new methods and it should be done in the presence of the manager, the departmental head, the labour officer and the mill doctor. This system will eradicate the existing evils of underhand dealings, jobbers' influence, bribery and corruption. Let us call this system "co-operative recruitment." The appropriateness of this system will mainly depend on the measure of co-operation that comes from all sides. The committee of four, in short, will form a scrutinizing section by (1) eliminating jobbers' influence, (2) testing a worker's minimum educational qualifications, (3) certifying the physical fitness of the operative, and (4) taking away the "tomorrow we die" feeling from the worker because of the subtle victimization in the department. Our present system which employs unskilled operatives on skilled posts results in increased wear and tear. I am aware of the question of skilled labour supply being difficult. When an unskilled

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person works on the machine, we all know that the effect on the machine is detrimental. I maintain this is a sheer wasteful method of recruitment of labour to our industry. Look at the position as it exists in our mills to-day. Let us take a fitter, for example. Ignorance and illiteracy generally are his traits to-day. We never judge his standard of education nor his ability at the time of his promotion. Instead of this, if some sort of compulsory tuition is given to him through the mill staff or the Social Service League classes of the knowledge of machinery which he is going to handle, the prevailing idea that our management recognizes labour by fits and starts would be without any backing and argument.

I do not understand why a man, when trained for certain kinds of machines, should be changed from that post and put to some other machine about which he is ignorant. Specialization and specialization alone should be our next campaign. Specialization and efficiency always go hand in hand. Our experience has so far shown that when a specialized oiler is given a jobber's post the oiler becomes a puzzled animal in a jungle-beat. The specialized oiler thus becomes a non-specialized jobber and the non-specialized oiler who is brought in the place of the original oiler has to pose as a specialized oiler. Thus the jobber and the oiler both turn novices in the line. Departmental heads and assistants who consume their very energy in turning an operative into a specialized operative also get disheartened and do not bother much when they see that the ever-changing line of men—skilled or non-skilled—is being promoted every now and then without any discrimination. They have neither the patience nor the energy to teach every new-comer his job every time anew with the same energy and vigour they taught an old operative working for many years on the same job. If this state of affairs is not to be repeated and specialization is to be adopted for the improvement of the industry, gradation scales of pay should be adopted. The highest limit must be fixed beforehand, say, Rs. 60 for an operative in specialization grade. Start him on Rs. 30 and gradually give him increment by scales every year. The criterion in fixing the minimum and maximum of the basic wage should be that he should reach the maximum on which his immediate superior was started. Let us take the case of an oiler. Let him start as an oiler, work as an oiler and die as an oiler and, above all, a *specialized* man. Such a man will do his job more efficiently and carefully and economically than any one else. We should always remember that this cultivation of specialized technique is nothing more revolutionary than developing and utilizing a latent talent in that particular worker.

If only there was specialized labour with our industry to-day, exceptionally rapid deterioration of our textile machinery would not have resulted under the present war conditions when stores and spare parts are so scant. Because no experimental scheme of this nature has hitherto been operated in any part of India, we should not, however, on this account neglect indefinitely the introduction of specialization. My idea of specialization is in the perfection of the workers' powers of mind and the job. The formal shackles of the old system must be broken and workers should be encouraged with the importance of specialization and its advantages. We all know that a good many workers are hopeless failures and were doomed at the start. But under the existing system they are not only doomed at the start but also doomed till the last. Workers do not like to be told that they are nothing but blundering specialists! A fitter thinks it below his dignity to remain a fitter all his life. But in my opinion, for a fitter to remain a fitter—a specialized fitter—is not at all something nasty, but rather something honourable and praiseworthy. After all, all these distinctions in designations and posts lead ultimately to one thing—their *speciality.*

All this talk of ours deals with time-workers whose standard of wages is fixed. But what is the position with regard to the skilled piece-workers such as weavers, etc. The answer is simple. They get specialized as the years pass on and their efficiency also improves. But here also we should place a limit to the highest point of one's efficiency. I would suggest through this scheme that a monthly allowance of a rupee or so should be given as speciality allowance after the completion of one year's service provided the operative keeps up to the mark of his efficiency. Thus after completing two years' service, he will be getting two rupees as speciality allowance, and as the years pass by a rupee will be added to his speciality allowance until he reaches his maximum allowance of Rs. 10 after eleven years of service—a service which is fairly equitable to make a weaver a specialized weaver.

Thus the labour will not only be a specialized labour but also a stabilized labour. One need not be frightened that the industry will have to pay too dearly for such a scheme, when one is convinced that the average speciality allowance will not be anywhere beyond Rs. 5 per head. And I am sure that this will be amply compensated by the standard of efficiency and better quality of production as a result of thorough specialization.

Non-skilled labour will always be a rolling stock. We should not bother much about this class of labour. But our skilled labour should always be specialized. He should be taken care of from the start. During the *badli* period, training should be given to him and he should pass the necessary test in the form of an examination before he is made permanent. He should also be certified by the medical officer of the mill for his physical fitness. Minimum educational qualification such as vernacular final and a little knowledge of English in our skilled labour should be emphasized. For this literacy campaign would have to be vigorously started. The teaching of adult illiterates is a new field. But once they are literate (by literate, I mean sufficiently educated and not qualified), they will present themselves at mills and factories like devotees at a shrine with a realization that the management they seek to undermine is the very basis of their future and well-being. Is it not equally obligatory on the part of the management to find ways and means for the well-being of this superabundant labour energy which seeks recreation in nauseating strikes on frivolous and personal differences? We all know what happens and how it happens when an oiler is promoted to a jobber's post. The oiler pays something in cash or kind to the head jobber and the head jobber, recognizing what he should do in return, agrees to report favourably regarding his work to the departmental boss. School leaving examination for the jobbers is quite sufficient for a jobber to justify his post and in addition Social Service League certificate should be made a compulsory qualification. Promotion in salary according to qualifications should be encouraged.

The Indian cotton textile industry is India's biggest industry in which more than Rs. 40 crores are invested. The profit margin at present of even a small mill every month is more than the profits made during the whole year of pre-war days. But this is our temporary gain. The post-war slump will be so catastrophic that the industry should rise to its responsibility now by suggesting constructive schemes which would place our industry in a sound position. The future historian should not record that the present industrialist, dazzled with the war-time prosperity, failed to see the post-war slump and thus deprived himself of the necessary strength to overcome the difficulties by not rising to his responsibility. We shall have to resort to rationalization and greater specialization of textile labour.

Internal Audit in Textile Mills

(*Concluded from page* 104)

who are already working in the rut are not likely to relish any interference with their methods from outside. They will put up resistance to his suggestions. The auditor has got to be very tactful and courteous in dealing with them. A sympathetic and agreeable disposition will enable him to convince them and win them round. Though he is clothed with necessary authority, it is not advisable for him to try to force his will on the staff. The members of the staff are not all creatures in logic; they are bundles of emotions, with strong likes and dislikes. With pleasant persuasion only can the auditor succeed in convincing them. The auditor has got to be sociable, commensurate with dignity. He has to reconcile two apparently antagonistic views of the staff and of the management and by improving the methods of working, he adds imperceptibly to the efficiency of the works as a whole, as well as of the individuals comprising the works—a distinct gain to both. He is an invaluable asset to the concern he is serving.

The British Electrical Industry

Its Contribution to Victory

DURING the early years of the nineteenth century many distinguished scientific men were investigating the phenomena of electricity, but until the attention of engineers was drawn to its possibilities no electrical industry could be said to exist. Great Britain was famous then for wise and skilful craftsmen in the engineering field, as she still is to-day. The great concerns of the north of England, the home of the millwrights and iron smelters, of the Maudslays, of Watt and Stevenson and many other pioneers, were often founded by men who worked in their shirt-sleeves at bench or forge, took their orders in person, and kept their accounts in little note-books.

Steam was then their source of power; but the tributary streams of electrical knowledge were gathering force, and when in 1831 a climax came with Michael Faraday's triumphant demonstrations of electrical induction—the principle of the transformer, and of the production of electricity from magnetism—the principle of the dynamo, the electrical industry was born. Faraday was himself a craftsman. With his own hands he built his apparatus, made his instruments, wound his electromagnets in his room at the Royal Institution, London; and as surely as the acorn contains the oak, from his creative discoveries our modern electrical industry is derived. Before his time many others had examined, experimented, recorded; but it was he who made the fundamental experiments and with infinite perseverance and extraordinary insight deduced from them the principles of electrical action.

Apart from telegraphy—in which, again, two Englishmen, Cooke and Wheatstone, were among the pioneers—illumination was at first regarded as the chief use of electricity. Years had to pass, and the industry had to establish itself in lighting, before the need for research on a large scale was felt and the conviction gained ground that hardly any limit could be set to the possibilities of this mysterious force. Individual manufacturing firms such as The General Electric Co., Ltd., of London, carried on their own investigations into technical development as an aid to progress; as in the old days, British engineers proved their skill, and the combination of scientist, engineer and electrical specialist evolved what we might term a new breed of men who took the lead in developing all branches of the growing industry and in a few years were to win the admiration of the whole world. Rapidly they expanded its scope. Generation, transmission, distribution became almost a separate science; the power station displaced the little "electric light works"; for the first time electricity became linked with heavy engineering. It drove the machine tools in factories, provided heat for the furnaces of metallurgical industries, for welding, for industrial cooking. In brief, it served the ever-increasing and never-ceasing activities of the country.

Electricity supply, of course, became more highly organized as time went on, and this organization reached its climax with the construction of the British Grid with its 132,000 V. main transmission lines—a magnificent achievement of British electrical engineering.

How, then, industrially speaking, did the nation react to the shock of war? A shock may paralyse energy, or stimulate it. There is no doubt about the answer. Thanks to the enterprise of the electrical manufacturing industry and to the untiring work of the research scientists, the country found itself well prepared for the urgent change-over from peace-time production to the needs of the armed forces; in fact the entire business and industrial personnel of the nation was ready and alert, as fully equipped with inventive ability, as full of vitality, as it had ever been. One of the most remarkable characteristics of the British people is their resilience, their entire inability to imagine the possibility of defeat, a quality of incalculable value when danger threatens. With scarcely any confusion or disorganization, the whole of the nation's industries were mobilized and directed to the economic effort of war, and gradually the best and most complete use of labour, machines, and materials was secured for the common purpose. Once more the old adage has proved true—unity is strength. And when the industrial history of the war years comes to be written, the contribution of the British electrical industry to that common purpose—the winning of victory—will prove to have been one of the strongest cords of all in that essential unity. Few people, perhaps, have a clear idea of the enormous significance of that industry to the war effort. When it is realized that no plane could fly without electrical equipment to operate the auxiliaries, no ship could sail without its electric power being in perfect working order to provide energy for the hundred-and-one purposes where electricity is required aboard ship (including the all-important one of illumination), no mechanized army could fight without its electrical accessories—tanks, self-propelled guns, armoured cars, transport vehicles, ambulances, etc., all, lacking electrical aid, at a standstill as surely as though the life-giving petroleum had suddenly dried up—it is easy to imagine the immensity and complexity of the task so successfully overcome.

The main source of the growth of the British electrical industry is often hidden behind the scenes. "During this war," said Lord Woolton recently, "the scientists of Great Britain had led the world. All the great discoveries of the application of science to war had come from our scientists at home, and we have reason to be very proud of them. In the electrical industry research has taken place on an enormous scale, and that industry has served the nation with very great distinction."

But war, we may be thankful to remember, is a temporary condition; however long it may last, peace is the normal state of healthy national life. Therefore, it is pertinent to take a forward glance, to ask how all this magnificent effort, concentrated on a single aim, can be distributed once more into the innumerable channels awaiting it when peace comes. The question cannot be answered in detail, obviously, for one result of war is an immense and comprehensive stimulation in the technical field, so that in every branch of science advances are made much more rapidly than in the calmer and less arduous atmosphere of peace. Especially is this true of electrical science, and if we consider the vast research and manufacturing resources of an organization such as **The General Electric Co., Ltd.**, the largest of its kind in the Empire, devoted for years to the production and development of equipment for the war effort, it is certain that when peace comes the experience gained will be of inestimable value. Every application of electricity including the very important new advances in electronics—comes within its province. Serving every essential industry, the new knowledge gained will be at the disposal of all who are concerned with reconstruction, and—another point worth noting—those who control this great British electrical enterprise have not forgotten to prepare, during the war-period, for a speedy transition to peace-production.

Much of the development in the years of war is necessarily of a secret nature; the science of radiolocation, for instance, is only one of many examples that might be mentioned. The main point to remember is that all these fresh applications of electricity will find their place in the requirements of peace; that British resource, skill and craftsmanship are no less sure than in the days of old; and that the British electrical industry is equal, as it always has been, to any demands upon its unrivalled service that the future may bring.

The Bihar Charkha Kambal Ashram Ltd.

Nasriganj, Shahabad

IN a remote corner of Bihar, where for 14 miles on either side no modern transport facilities are available, there exists a very successful band of social workers called the Bihar Charkha Kambal Ashram Ltd., who have organized a modern wool spinning and weaving centre where technical training is imparted to more than 200 villagers including 25 women. This Association has formed other branches in different places, two in Gaya District, one at Rafiganj and the other at Nabinagar where about 600 poor families earn their living in wool spinning work. One branch is at Dehri-on-Sone (Shahabad) and a branch has been recently opened in 46 Cross Street, Calcutta, for the sale of its products. The Ashram has 12 main departments such as spinning, weaving, dyeing, carpet manufacturing, sheep rearing, carpentry, smithy, shoe making, sales, propaganda and teaching section, etc., each department being under the charge of a responsible officer. The Managing Director is Baboo Ram Swaroopjee.

The "Vyayamsala" is generally attended by almost all the inmates of the Ashram. There is a library with a reading room.

The second prize-distribution ceremony of the Ashram was held recently under the presidentship of Dr. H. K. Sen, Director of Industries, Bihar. The function began with prayer and welcome songs, after which Dr. H. K. Sen, Director of Industries, Bihar, and Mr. N. P. Neemuchwala, Textile Expert to the Government of Bihar, were welcomed by the Managing Director, Baboo Ram Swaroop, after which separate addresses were presented to them.

Baboo Jaganarayan Prasad, Director of the B. C. K. A. Ltd., then read the report of the Ashram and Dr. H. K. Sen distributed more than a hundred useful prizes like brass utensils and clothing to the winners.

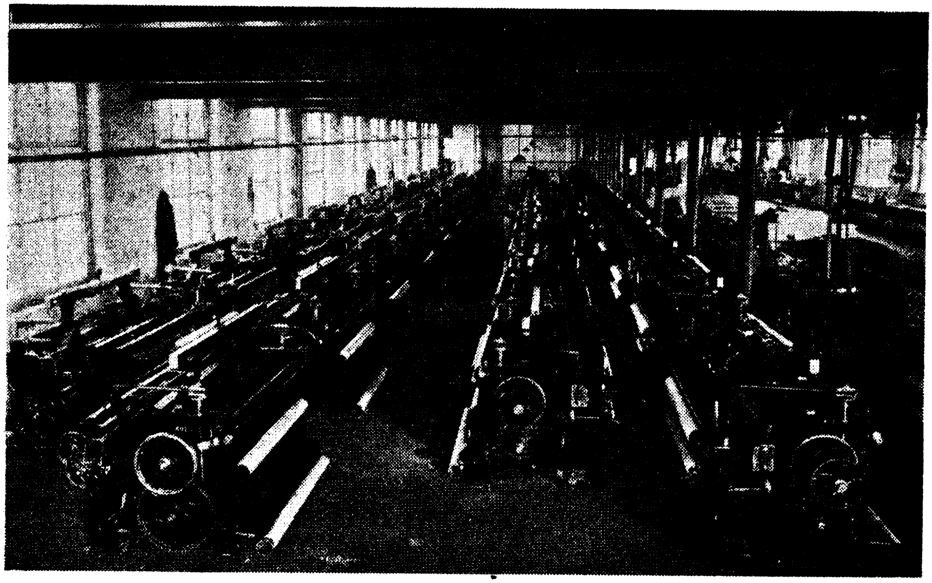
Mr. N. P. Neemuchwala congratulated the promoters of the Ashram and emphasized the usefulness of such bodies in a backward province like Bihar and in a remote corner like Nasriganj. He assured them of Government recognition of their training, when they reach the levels obtaining at the Government Wool Institute, Gaya, Government Silk Institute, Bhagalpore, and Government Cottage Industries Institute, Gulzarbagh, Patna. He also expressed appreciation of the services so far rendered by the Ashram to the Government in supplying a larger number of blankets through the Wool Emporium, Gaya, to the fighting forces and he thanked them for their generous donation of one hundred blankets worth Rs. 525 to the Bengal Relief Fund and for another generous donation of Rs. 250 for the Red Cross, Rs. 50 to the Royal Indian Navy Benevolent Association and for taking part in the War Services Exhibition held at Patna at its own cost.

Robert Hall & Sons (Bury), Ltd.

Completes One Century of Textile Machinery Making

THE well-known firm of textile machinery makers, Robert Hall and Sons (Bury), Ltd., was founded in 1844 and so celebrates its centenary this year. It was actually started in April ; the first week's wages, recorded in a wage book which is still in possession of the firm, being paid on 13th April 1844 and amounting to £8 14*s*. 10½*d*. There were four partners, Squire Diggle, William Tuer, William Hodgson and Robert Hall. The first of these, Diggle, retired soon after the business started and the firm became known as Tuer, Hodgson and Hall, and it is recorded that these three partners carried on a partnership without deed, articles or written agreement. William Hodgson retired in 1860 and the style of the firm became Tuer and Hall. In 1862, William Tuer died and the business was carried on by Robert Hall alone in his own name until his death in 1888. He left it to his three sons, Samuel, John and Robert who continued under the name Robert Hall and Sons, until 1895 when it became a private limited company under its present title. At the present time, a great-grandson, Mr. Gerald K. Hall, is Chairman and Managing Director, another great-grandson, Mr. O. Herbert Hall, Director and Secretary and a grandson, Mr. Wm. H. Hall, a Director.

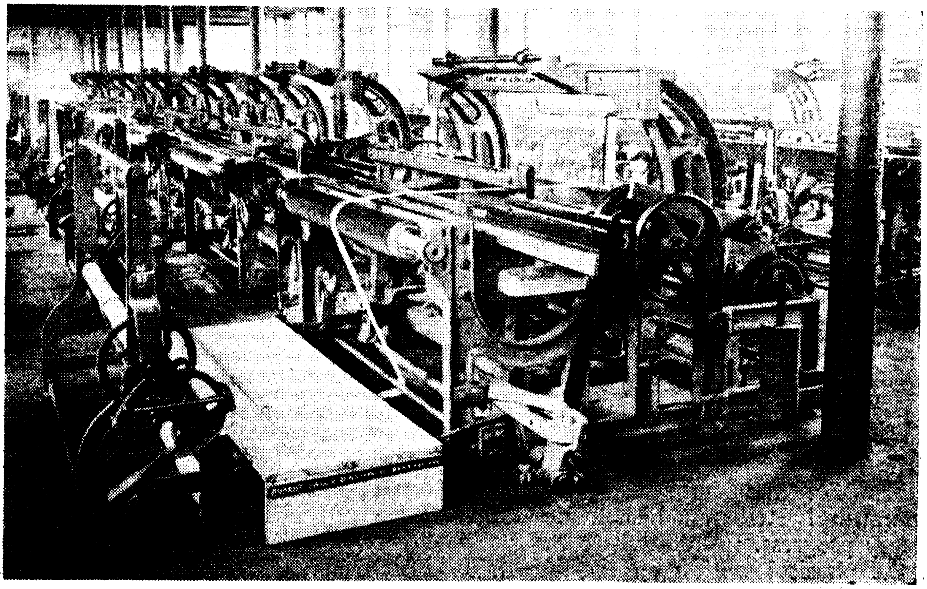
Records of early achievements are somewhat sketchy and incomplete with the exception of the wage books which are complete from the beginning. It is, however, known that right from the start, the firm has specialized in looms and other textile machinery, although they also undertake general engineering work, and in their early days made steam engines, some of which, made in the 40's, were working up to a few years ago. Other machinery made nearly 100 years ago, is still at work in some places, though such old machinery is now rightly being rapidly replaced by new, and in many cases, by up-to-date types made by Messrs. Hall. When the four partners started, they seem to have acquired a building somewhere near the middle of the present site which covers an area of over 2 acres. Progress has always been constant, new buildings were erected from time to time and as years went on these were modernized or replaced, and so far as can be stated with any certainty, it is probable that the oldest part now in



Light Loom Department

existence with the exception of perhaps certain walls, dates back to 1876. From that year onwards until the present century appears to have been a time of consolidation and improvement of what had been put down. Then during the first 25 years of the present century, certain new buildings were put up and, more recently, developments have been in other directions, not so noticeable but still important. The aim of the firm has always been to give satisfaction to users by producing machinery which is efficient and will stand up to the work required of it without unnecessary complications, in other words, simplicity has been the idea and the fact that the firm retains many customers on its books almost since the beginning and is constantly finding new ones, proves the wisdom of the policy.

Many outstanding achievements stand to the credit of the firm, such as the Heart traverse motion for bobbin winding machines—patented by Robert Hall over 70 years ago and which, it is said, has never been surpassed, Hall's eccentric drop box motion which is one of the best of its kind, the Moxen wire motion for carpet looms perfected by them and other outstanding inventions. In recent years, they have built a number of wide looms for special purposes up to 36 ft. wide, also exceptionally heavy looms capable of weaving fabrics one inch and even more in thickness. They are also always willing to design machinery for special purposes. Lately, individual motor drives have been very popular and types have been evolved suitable for practically every loom and machine the firm makes. They are highly successful and very efficient and if users of their machinery follow their advice, they may be sure of having a drive which in the first cost may not always be the cheapest, but in the long run will be most efficient. The firm's business has been world-wide and normal work is, of course, greatly restricted on account of war conditions, but it can safely be asserted that when hostilities cease Messrs. Robert Hall and Sons (Bury), Ltd., will be to the fore as makers of modern textile machinery. They possess their own foundry, blacksmith's shop, machine and fitting shops, and also have extensive woodworking departments and so are able to design machines made in the best way for the purpose in view, whether the predominant material be cast iron, steel, wood or other material, and use these different raw materials in the most effective way. Their representatives in India are Messrs. Marshall, Sons & Co. (India), Ltd., who have offices in Bombay, Calcutta, Madras and New Delhi.



Fitting Department for Sail Cloth and Duck Looms

Progress in Chemical Technology

Bombay University Department's Report For 1943-44

Evidence of Co-operation from Industrialists

INVESTIGATIONS subsidized by the following industrialists, industrial organizations or Government Departments were completed or were in progress at the Department of Chemical Technology, University of Bombay, during the year 1943-44:

Sir Ness Wadia, K.B.E., C.I.E., Bombay; Rajderkar & Co., Bombay; Imperial Chemical Industries (India) Ltd.; Anil Starch Products, Ltd., Ahmedabad; Pioneer Magnesia Works, Ltd., Bombay; Indian Central Cotton Committee, Bombay; Imperial Council of Agricultural Research; and the Board of Scientific and Industrial Research of the Government of India.

The graduates of the Department have found employment with Kesoram Cotton Mills, Calcutta; Imperial Chemical Industries (India) Ltd.; Vasant Vijay Mills, Bombay; Modern Chemical Works, Dhulia; Anil Starch Products, Ahmedabad, and the Pioneer Chromate Works, Bombay. Besides, the management of the following mills and factories permitted the students of the Department to work as apprentices :—

Morarjee Goculdas Spinning and Weaving Co., Kohinoor Mills Co., Finlay Mills, Shree Ram Mills, Khatau Makanji Spinning and Weaving Co., India United Mills, Standard Mills Co., Bombay; Mafatlal Fine Spinning and Manufacturing Co., Navsari; Shree Sayaji Mills, Baroda; Lakshmi Cotton Manufacturing Co., Sholapur; Navsari Cotton and Silk Mills, Navsari; Dharamsi Morarjee Chemical Works, Shree Niwas Cotton Mills, Pioneer Chromate Works, Imperial Chemical Industries (India) Ltd., D. C. M. Chemical Works, Delhi; Mettur Chemical and Industrial Corporation, Trichinopoly; and Tata Chemicals, Mithapur.

The wool research scheme under the auspices of the Imperial Council of Agricultural Research has made satisfactory progress. In addition to the work in the physical section on the lines laid down originally investigations have been undertaken on the chemical side on the grease, nitrogen and sulphur contents of wool.

The following schemes were in operation under the auspices of the Board of Scientific and Industrial Research :— 1. Preparation of vat dyes. 2. Determination of the constitution of some commercial dyes. 3. Synthetic dyes and modified shades from cutch. 4. Preparation of aniline from chlorobenzene.

Half-yearly reports on the progress of these investigations were submitted to the Board. A series of papers on the results obtained are under preparation. The process for the preparation of standardized dye extracts from plant materials developed under the auspices of the Board of Scientific and Industrial Research has been purchased by a Calcutta firm. A process for the preparation of an extract of the essential tinctorial constituent of annatto dye for use in colouring foods has been purchased by a Punjab firm.

The Department continued to render assistance to the Chemicals Directorate and the Cotton Textiles Directorate of the Supply Department. The preparation of the insecticidal chemical and the dye referred to in the Annual Report for 1942-43 was continued during the year. Minor quantities of other chemicals have been supplied and negotiations are under way regarding the large-scale production of an azo dye.

Analytical Work and Technical Investigations

There has been marked expansion in the work of the Analytical Section. The inquiries dealt with during the year amounted to 209, involving 451 analytical estimations, as against 108 inquiries and 160 tests in 1942-43. This rapid increase in work was in spite of the fact that no samples were accepted for analysis for about two months, when the transfer of the department to Matunga was in progress.

Besides routine analysis, a number of investigations were undertaken and completed, e.g., bleaching of silk fabrics to a perfect white and fastness of khaki-dyed materials.

Of the total number of samples received for analysis, about 70 per cent. were from Bombay Province, and the remainder were from places as far removed as Radhanpur, Cawnpore, Gwalior, Morvi, Jullundur and Indore. About 40 per cent. of the work related to textiles, involving the analysis of starches, desizing agents, wetting agents, dyes, water, etc. In addition to analysis and investigational work, the section has also prepared and supplied a few chemicals to local firms. The Research Assistant for Preparations has been engaged in the preparation of organic chemicals required for the University examinations.

The work of the section has indicated a general tendency towards unskilled adulteration. Thus starches have been very commonly mixed with tamarind flour, *udad dal* and even clay ; gums have been found to be mixed with china-clay or starches ; sulphur blacks have been liberally mixed with coal dust ; a sample of sodium sulphate was passed off as barium chloride ; castor oil soaps are being sold as vegetable tallow ; and numerous cases of a similar character are being repeatedly detected and reported upon.

The following are some of the additional items of equipment purchased for the department during the year :—Extension to the cylinder drying machine, which now has 15 cylinders ; special developing range for mineral khaki ; extension to the open soaper ; 10-gallon cast iron oil jacketed mixing vessel ; General Electric model, 12 c. ft. refrigerator ; cast iron steam jacketed chemical pots ; reducer complete with all accessories ; six electric motors ; and weighing machines.

Higher Research Degrees

The following students qualified for higher degrees by research :

Student	*Degree*	*Thesis*
S. H. Mhatre	M.Sc.Tech.	Hypochlorite oxidation of cellulose in presence of reduced vat dyes.
R. J. Phadke	Ph.D.	A new method for the synthesis of polyhydroxy flavones.
K. S. Khandheria	M.Sc.Tech.	Action of light on some organic colouring matters.

Progress of Research Work in the Department

The results of the research work carried out in the department are published either as independent bulletins or as articles in scientific and technical journals. Among the papers so far either published, or forwarded for publication, or ready for publication, mention may be made of the following :—

Technical education ; wetting agents in textile processing ; anthraquinone vats dyestuffs ; use of emulsified organic solvents in kier boiling ; experiments on mineral khaki; Bombay University wool research scheme ; the nature of Indian wool and an examination of its physical and chemical properties ; cellulose in the presence of reduced vat dyes ; action of light on some organic colouring matters ; colour fastness standards ; various light sources as colour fading agents on textile materials.

Of the work that is in progress at the Department's laboratories and that is expected to continue during the year 1944-45 we may refer to :

Preparation of alizarine and indanthrene blue; vat dyes from benzonthrone and aminoanthraquinones ; sulphurised and halogenated vat dyes ; constitution and purity of certain commercial dyes ; synthetic dyes from catechin ; pigment colours in printing ; azoic dyes ; dyes with surface active and chemo-therapeutic properties ; anthraquinone dyes ; dyes with cashew-nut shell oil ; starch products and oxidation of starch, and chemical finishes on short-staple cotton yarns and fabrics.

Mechanical Harvesters to Reduce Cotton Production Costs

MECHANICAL cotton harvesters that will lower production costs and increase efficiency seem to be American cotton's answer to the challenge of synthetic fibres and foreign cotton production. These were displayed in Dallas, U.S.A., at the 1944 Cotton Research Congress.

" How Cotton Can Meet To-day's Challenge " was the theme of the Congress, sponsored by the State-wide Cotton Committee of Texas, and numerous exhibits of cotton pickers, strippers, choppers, dusting equipment and other machinery were convincing evidence that American inventive genius is prepared to meet the challenge.

Such an exhibit of mechanical harvesters would not have been possible a year ago, because some of the machines have just been developed and improved to the point where their manufacturers are ready to display and demonstrate them.

Exhibited at the Congress were a number of different machines made by commercial firms divided into two types: the picker and stripper type.

Holidays With Pay to Factory Workers

Government Bill in Central Assembly

IN moving that the Bill further to amend the Factories Act 1943 (Second Amendment) be referred to select committee, the Hon'ble Dr. B. R. Ambedkar, Labour Member, Government of India, said:—

The provisions of the Bill fall into two parts. Part I of the Bill deals with compensatory holidays for the loss of compulsory holidays. In section 35 of the Factories Act it is obligatory upon the owner or manager of the factory to give one compulsory holiday to every adult worker in the factory. This provision is subject to the provisions contained in sections 43 and 44. Sections 43 and 44 provide that the Inspector of Factories may permit exemptions being granted to the manager of the factory or factory owner from the obligations imposed by section 35. The view that is taken is that when such exemptions are granted, they ought to be compensated by other holidays, equivalent in number. Health and efficiency of the worker requires that he should have the requisite number of holidays which are prescribed by law.

The Act, as it stands, makes no such provisions for compensatory holidays. Consequently, clause 2 of the Bill has been introduced for the purpose of removing this lacuna. It will now be open for the provincial Governments to make rules subject to certain adjustments that wherever exemptions have been granted under section 35, compensatory holidays of the equivalent amount shall be granted to the workmen.

Labour Convention

Coming to the second part of the Bill, the provisions contained therein deal with the question of holidays with pay. In 1936 the International Labour Conference passed a convention relating to it. The Government of India, which was represented at that International Labour Conference, was not prepared to accept the convention and to ratify it, and they moved a regulation in the Assembly on the 26th July 1937 proposing the non-acceptance of the convention.

The resolution was carried. But while the Government did not find itself in a position to ratify the convention, the member in charge of the resolution said that the Government would explore and examine the possibilities of giving effect to the convention, if not wholly at any rate in part, and undertook to have consultation with the provincial Governments and all the associations representing the employers and employees to find out to what extent there was a general agreement in the matter of this convention. Part II of the provisions which relate to holidays with pay are the result of this examination and exchange of views which have been going on over a considerable number of years.

Turning to the Bill itself, it will be seen that it applies to perennial factories only. It is undoubtedly limited in its scope as compared to the provisions contained in the convention which was adopted in 1936, but as a beginning it should be welcome. The other provisions could be covered by the four different points which need legislation dealing with holidays, viz., length of holiday ; qualifying conditions for a right to a holiday ; limiting conditions ; pay during holiday.

With regard to the first point, namely, length of a holiday, this is a matter which is dealt with in the new section 49B which the Bill proposes to add to the Factories Act. According to this section, the total holiday is to be on seven consecutive days for a worker who has put in continuous service for one year. In fixing this period of seven days, Government have followed the provisions contained in the Geneva convention of 1936 which laid down six days as the limit of the holiday. To that a seventh day has been added, which is a compulsory weekly rest granted to a worker under section 35 of the Factories Act.

With regard to the question of qualifying conditions laying down as to when a worker will be entitled to claim a seven-day holiday, the provisions contained in the Bill are as follows: As a matter of fact, there is really only one condition and that is that the worker must have put in a period of twelve months' continuous service. There is no other condition. With regard to the question as to what is continuous service of twelve months, the Bill provides for what are called interruptions and declares that certain interruptions shall not invalidate the claim for holidays with pay. The interruptions which are mentioned in the Bill are interruptions arising out of sickness, accident, authorized leave, lockout period and a strike period, provided the strike is legal.

Involuntary Unemployment

There is also another provision in the Bill which relates to the same subject and that is the question of involuntary unemployment caused by the desire of the factory owner to close the factory, and limited to a period of 30 days. If the involuntary unemployment caused by the factory manager does not extend beyond 30 days, then that would not invalidate the claim of the worker for his right to holidays with pay. Holidays with pay must necessarily take into account the ability of the manager or the factory owner to pay, and if the manager or the factory owner is obliged to close his factory for more than 30 days, then it is legitimate to presume that he has really not been prospering as well as he ought to and that he is therefore not in a position to pay the cost for holidays with pay. But if the involuntary period does not exceed 30 days, then the presumption is that he is still able to bear the cost and should bear. The Bill also provides for limited conditions with regard to holidays with pay, and that limited condition relates to the question of accumulation of holidays. The Bill provides that a worker who has been qualified to earn his holidays may be entitled to accumulate holidays for two years and that is for a total period of 14 days.

The first point *re.* pay during holidays is that although the total period of the holiday is seven only six are declared to be paid holidays. The seventh is really a day of weekly rest provided under section 35. With regard to the seventh day, the Bill does not make it obligatory upon the employer to pay for it. But at the same time the Bill does not take away the right of the employee to demand payment, if as a matter of fact as a result of his contract of service that holiday was due to him as a paid holiday. It is really left to be governed by the contract of service. The third point is with regard to the payment to be made for these six holidays. The rule that we have adopted in the Bill is a rough, equitable rule and it is this : a worker is to be paid at a rate equivalent to the average of his earnings during the three preceding months barring overtime. The Bill also provides that in order to enable a workman to take his holiday, some facilities should be given him in order to have some cash with him on the day on which he proposes to start on his holiday. Consequently provision is made in the Bill that half the dues which are to be paid to the workmen going on holiday shall be paid to him at the start.

Another matter which is relevant to this and is also important is this. The Bill proposes to exempt certain factories from its operation if it is found that a factory has a system of holidays with pay which is substantially similar to the one provided in the Bill and about whose satisfactory character the provincial Government is able to certify. The object underlying this clause is that if there is a voluntary arrangement between the employer and the worker whereby the worker is given the same privilege which we are providing in the law, the view taken by the Bill is that in so amicable an arrangement it is unnecessary for the law to enter.

The questions of discharge of a workman by the employer to prevent him from earning his holiday and of the employer inducing a workman not to take his holiday although he has earned it are not being provided for in the Bill. The view of Government is that at the present stage, at any rate, there is no reason to suppose that such contingencies will arise. If experience shows that such cases do become usual it would be time then to amend the Act to stop their recurrence. For the moment the provisions of the Bill are sufficient for the purposes which it has in view, namely, to grant holidays with pay to factory workers.

War Risks Insurance of Goods and Factories

How They Operate in India

WAR risks insurance in India is governed by two schemes, viz., the War Risks (Goods) Insurance Scheme promulgated in October 1940 and the War Risks (Factories) Insurance Scheme promulgated in April 1942. Under these two schemes the Government of India provide cover against land war risks for goods for sale in business, factory properties, etc.

Both the schemes are based on the compulsory principle, so as to distribute the risk evenly over vulnerable and non-vulnerable areas in order to keep the rate of premium as low as possible.

The total receipts under the War Risks (Goods) Insurance Scheme up to the end of the third year of its operation, i.e., up to 30th September 1943 amounted to Rs. 11,86,90,369, against a total expenditure of Rs. 13,43,516 only. During the first year of its operation, i.e., up to 31st March 1943, receipts under the War Risks (Factories) Insurance Scheme amounted to Rs. 9,07,89,880, against a total expenditure of Rs. 4,09,255 only.

Under War Risks (Goods) Insurance Scheme, insurance is compulsory if the value of all such goods owned by the seller thereof and held by him in any one Presidency town or district exceeds Rs. 20,000; in other cases insurance is optional. Insurance is by quarterly periods and the rate of premium, which was originally fixed at half-anna per one hundred rupees per month, has been revised from time to time; the rate for the October-December 1944 quarter is one-anna and three pies per month for every complete sum of Rs. 100.

The Factories Insurance Scheme, though designed primarily to cover factories (as defined in the Factories Act of 1934), also applies to certain other properties, e.g., above-ground machinery of mines, the distribution and transmission systems of specified gas, electricity and hydro-electric undertakings, and inland vessels of specified trading corporations. This scheme is worked on a single premium basis. The period of insurance was originally fixed for two years from 1st April 1942 in respect of all properties, other than inland vessels in which case the period was one year from 1st April 1943. Both these periods have now been extended to 31st March 1945. The rate of premium for the entire period is 4 per cent. of the insurable value of the assets in the case of inland vessels, and 5 per cent. in the case of factories insurable under the scheme.

War-time Industrial Expansion in India

Seven-fold Increase in Production of Parachutes

CONCENTRATION on the production of parachutes, changes and improvements in the patterns, designs and modifications of clothing required by armed forces, larger increases in timber production, further expansion of industries for miscellaneous stores and continued exploitation of indigenous sources for the manufacture of drugs—these were some of the main features of the activities of the Directorate General of Supply in the fifth year of war.

The manufacture of parachutes generally and of supply dropping parachutes particularly has increased sevenfold in the last year. Rapid strides have been made in the production of cotton parachutes. Between January and August 1944 production has stepped up to more than three times the figure for the number of parachutes manufactured from the commencement of production to December 1943.

Equipment of Parachutes

The manufacture of a special type of parachute has again been taken in hand and there are indications that considerable increases in production will shortly be established. India also continued to manufacture equipment dropping parachutes for which Indian silk was used. Ancillary equipment for all types of parachutes have also been manufactured in proportion to production of parachutes. This important war job is being done at two Government factories solely employed in the manufacture of cotton parachutes and one factory in the manufacture of man dropping and equipment dropping parachutes and ancillary equipment.

The year 1943 was the peak year with regard to supply of tailored items of clothing. India was then the nearest supply base for armies operating in the Middle East and in March 1943 over 12 million items were fabricated. In the fifth year of war the ordnance clothing factories were called out to supply just under 7 million items a month. With reductions in demands for clothing and with increased demands for parachutes it was possible to turn over one ordnance clothing factory completely to parachute work. Another factory has been split into two, one for clothing and one for parachutes. There are thus now 8 ordnance clothing factories fully employed on fabrication of tailored items of clothing and necessaries, employing a labour force of 90,000 excluding the indirect labour employed by tailoring contractors throughout India. Some idea of the combined output of these factories during the period under review can be had from the fact that they accounted for and converted some 215 million yards of textiles, over 5,600 million yards of sewing threads and over 500 million buttons and numerous minor components into 78,941,597 tailored items of clothing and necessaries.

Changes in Clothing Supplies

A striking feature of clothing supplies in the fifth year of war was the intensity of change and improvement in patterns, designs and modifications of clothing stores. There was a significant change in the character of the load. Demands for hospital clothing, prisoners-of-war clothing and clothing for Chinese troops were decreased, but the ordnance clothing factories met the requirements of the United States Forces in India. An increased quantity and variety of items were supplied to the Royal Air Force, Indian Air Force, Royal Indian Navy and the Uniformed Women's contingents. The battle-dress for the South East Asia and India Commands was produced in olive green and that for Mid East in khaki.

The woollen industry which at one time was being entirely used for war production is now meeting civilian demands as well. Thus the value of army blankets has fallen from Rs. 3 crores in the previous year to Rs. 1,38,56,256. Purchases of silk and jute for war purposes continued to be made during the year.

Chemical Production

With an over 100 per cent. of increase in production since the beginning of the war, the Indian chemical industry has now come into its own. Soda ash, caustic soda, bleaching powder, chromic acid, sodium thiosulphate and calcium chloride are some of the more important chemicals which were not produced or were produced only on a very small scale before the war. A very large number of pharmaceutical and other chemicals are being manufactured which used to be imported in the past.

Cotton Mill Re-equipment

Co-operative Purchase of Machinery in the Post-war Period Suggested

THE following are extracts from the speech delivered by Mr. M. S. Ramchendra Rao, B.A., Chairman and Managing Director, Sri Krishnarajendra Mills, Ltd., Mysore, at the twenty-fourth ordinary general meeting of the company on Saturday the 14th October, 1944. He dwelt at length on the war-time prosperity and post-war problems of the Indian cotton mill industry.

" With the problem of rehabilitating the whole of Europe, with the removal of Japan from the competitive field, with the revival of the huge demand for textile goods from other parts of the world and, above all, with the heavy and continued shortage of cloth in our own country, the Indian cotton mills may expect to be kept continuously busy for a number of years to come. Also, it appears fairly certain that we should reconcile ourselves to the continuance of the present controls even after the war comes to an end ; and it is perhaps just as well that that should be so both from the point of view of the manufacturers as well as in the interests of the consumers, to whom the equitable distribution of the products of the industry is of supreme importance, and that can best be secured only under the present arrangement.

" With the fixation of prices of cloth and yarn at lower levels by the Government, with no corresponding reduction in prices of cotton, with the increase in prices of coal, stores, spare parts and other miscellaneous items resulting in the steady increase in production costs, the cotton mills all over India must be prepared for a decline in their earnings in the coming years. One chief item contributing to the increase in direct costs is the steady rise in the wage bill, which in our case is to-day more than double what it was in the period before the onset of the war. This in itself would be no cause for dissatisfaction, if only the workers, prompted by a spirit of enlightened self-interest and by putting forth better effort, would take full advantage of the opportunities for increased earnings afforded to them and improved their living conditions.

" We have already prepared post-war reconstruction programmes, both near-term and long-term, for revitalizing the existing plant and machinery, as also for replacement of obsolescent plant with modern types. It is apprehended that prices of new machinery after the war are likely to be high by at least 300 per cent. and of spare parts much higher. We estimate that the cost of the present programme, which does not include any scheme of expansion, will be of the order of Rs. 10 lakhs and we have already placed orders for machines and machinery parts of the value of Rs. 2 lakhs. But the scramble for capital goods immediately after the war will be so great and foreign manufacturers, on whom unfortunately this country has to entirely depend for every kind of textile machinery and parts, are likely to impose such onerous conditions in regard to prices and deliveries, that unless some form of co-operative action is taken by the textile industry as a whole, many cotton mills will find it extremely difficult to procure their requirements while the weaker ones among them are sure to be left behind. This aspect of the matter has not been lost sight of by the management.

" Another direction in which such collaboration and combined action on the part of the textile industry are urgently called for, is the manufacturing of textile machinery parts in this country itself. This is, of course, a matter of long-range planning and may take anything from five to ten years to materialize, even if such an enterprise is undertaken in the immediate future. There are excellent possibilities and facilities for such an enterprise in Mysore.

" In disposing of the profits made by the company in the last 3½ years, the directors have been guided by two main considerations. First, the imperative need for conserving the company's resources and strengthening its finances so as to enable us to face the future with confidence. We would have to be prepared for a possible post-war trade slump, though one may hope that such a reverse might be averted or, if inevitable, might not be of long duration. At the same time the need for revitalizing and modernizing the mills' plant and machinery, which are over twenty years old and have been subjected to undue stress and strain in the past few years, is very urgent. All this needs plenty of finance and the reserves of nearly Rs. 19 lakhs which we have now built up should stand us in good stead in meeting this demand.

" Secondly, the directors have attempted to the best of their ability to co-operate with the Government in their anti-inflationary measures by resisting the temptation of high dividends out of what may, generally speaking, be called war-time prosperity and by retaining the bulk of our earnings in and for the benefit of the industry itself. Thus, out of a total profit of Rs. 67 lakhs made during the past 3½ years as much as Rs. 42 lakhs or 62 per cent. have been retained in the industry itself. This has enabled the company not only to become free from all external indebtedness but has added substantially to its fluid resources."

Progress of Cloth Distribution

Permit System at Work

TO ensure equitable distribution of cloth to all parts of the country, the Textile Commissioner, on the advice of the Textile Control Board, decided to introduce a new scheme of distribution of piecegoods from Bombay. The scheme, which came into operation from 1st November, provides that a manufacturer or a merchant of Bombay (possessing a valid Bombay Government dealer's licence) desiring to despatch cloth out of the Bombay surplus area must first of all obtain a permit from the Millowners' Association or the Bombay Cloth Distribution Panel respectively and then register for its despatch with the office of the Textile Commissioner, after duly filling in all the details required. After scrutinizing the permits which contain details about the description of cloth, its quantity, the name and address of the consignee, etc., the Textile Commissioner's office, will advise the manufacturer or merchant concerned about the date and place where the goods should be presented for despatch to its destinations by rail, motor transport or steamer.

As from 1st November no registrations, without such permits for despatch of piecegoods from Bombay to any destination outside the Bombay surplus area as defined in the Cotton Cloth Movements Control Order, are being accepted by the Textile Commissioner.

The introduction in Bombay City of the above system means that every Provincial Textile Commissioner will be advised of the despatch of every bale and to whom it has been despatched. In order to check black-marketing the Textile Commissioner has asked the various Provincial Textile Commissioners, excepting the Provincial Textile Commissioner, Bombay, to requisition from the consignees in the various deficit zones in India such quantities as they deem fit and distribute them to any retailers in these zones at the ex-mill price stamped on the cloth plus 10 per cent.

This action will cause no hardship on any dealer in piecegoods either in Bombay or in any of the deficit zones as all persons despatching these bales have signed a declaration stating that they have not invoiced or charged such bales to the consignees in the deficit zone at a price in excess of the ex-mill price plus 4 per cent.

All dealers in all deficit zones, i.e., in all parts of India outside the Bombay Province, Baroda State, the Western India and Deccan States, are warned that this procedure has been adopted and that they should under no circumstances pay for any cloth consigned to them from Bombay a price in excess of the ex-mill price plus 4 per cent. If they do receive any bales under permit for which they have paid, or if they should be asked to pay more than this, they should immediately inform the Office of the Textile Commissioner who will take appropriate action against the offenders including the cancellation of their Bombay Government Cloth Dealer's Licences.

From the 1st December 1944 no application will be considered by the Bombay Cloth Distribution Panel from any dealer unless an identity card is produced at the time the application is handed in and again when the permits are delivered.

Identity cards will be available for dealers at the Hindustani Native Merchants' Association's Hall, Kalbadevi Road, Bombay, between the 15th and 25th November. All that is necessary to do to obtain one is for the dealer himself or some person holding his power-of-attorney to call at the office between the hours of 11 a.m. and 1 p.m. or 3 p.m. and 5 p.m. with his original Bombay Government Cloth Dealer's Licence on production of which the necessary identity card will be handed to him.

Issue of Permits

Cloth dealers and others concerned are informed that after the Bombay Cloth Distribution Panel has notified that no further permits will be issued for the despatch of goods to any particular deficit zone, no sales of cloth should be made by any merchant in Bombay for destinations in that particular deficit zone. The issue of permits to the following zones was stopped on the dates mentioned against each, says a Press Note from the Textile Commissioner, Bombay :—

Punjab Deficit Zone 16th November ; South Deficit Zone 10th November ; Bengal Deficit Zone 9th November ; Sind Deficit Zone 9th November ; Rajputana Deficit Zone 15th November.

This was done as sufficient permits had been issued by these dates to ensure that these areas obtained their fair share of the piecegoods available. If any dealer continues to sell in November to these deficit zones after the dates mentioned it would merely result in cloth being immobilized unnecessarily and the other deficit areas in India not getting their fair share out of the cloth delivered from the mills during November.

Dealers must also clearly understand, the Press Note adds, that the fact that they may have sold cloth in November with the intention of getting priority for their applications for permits in December or January will not assist them in getting such priority. Dealers should sell during the current and following months only up to the total quantity allotted for any particular zone during that month. The day-to-day position in this regard can be ascertained at the Office of the Bombay Cloth Distribution Panel in the Mulji Jetha Market, Bombay.

CONTROL NEWS AND NOTES

Cloth and Yarn (Control) Order Amended

The Government of India have, by a notification in the *Gazette of India* dated 4th November, amended Clause 14 of the Cotton Cloth and Yarn (Control) Order, 1943. Under the clause as amended it will be an offence for any dealer to buy or sell or have in his possession after 31st December 1944, any cloth or yarn manufactured and packed before 1st January 1944. The clause further lays down that any cloth or yarn, whether manufactured in India or imported, must be finally disposed of within 12 months from the last date of the month marked on the goods; no such cloth or yarn shall be kept in unopened bales after six months from that date.

The Textile Commissioner desires it to be known that no extensions will be given in the time for disposal now laid down unless for the most compelling reasons, and the holder of the goods can show that they could not be sold due to causes entirely beyond his control.

Handloom cloth is exempted from the above provisions.

Samples of Cloth and Yarn

An Order issued by the Textile Commissioner in the *Gazette* on 28th October makes it possible for trade samples of cloth or yarn not exceeding half a pound in weight to be sent by book post with open ends provided that the cloth samples do not exceed 18 inches in length. They may be of the full width of the cloth subject to the above limits.

Prices of Imported Cloth and Yarn

By a notification in the *Gazette* dated 14th October 1944, the Government of India have fixed the maximum wholesale and retail prices of cloth and yarn imported from outside India. No goods so imported can be sold to the consumers, at prices which exceed the landed cost by 32 per cent. in the case of cloth and 26.5 per cent. in the case of yarn. When a consignment of goods has arrived or is about to arrive, the importer should apply to the textile authority of the Province in which the port of arrival is situated along with samples of the goods and relevant documents to determine the landed cost, which will include the price charged by the exporter at origin, freight, marine and war risk insurance, transit charges at the port of entry and customs duty. In case of disparity between this figure and the ceiling price for similar goods of Indian manufacture, the Provincial authority is empowered to fix the landed cost at such higher or lower figure as may appear to him fair. A fee equal to one half per cent. of the landed cost shall be levied before a certificate is issued. The importer may not charge more than 10 per cent. over landed cost in respect of sales of cloth or yarn to a dealer. A dealer may not charge more than 20 per cent. over the importer's price in respect of cloth or 15 per cent. over the importer's price in respect of yarn. Where the importer sells direct to a consumer he may not charge prices higher than that permitted to a dealer.

The importer will have to undertake the responsibility of getting the goods printed with TCB and other specified markings. These markings should be made within a specified period after the landing and under the supervision of an officer authorized by the Controller. An importer should not unpack a bale or a case without the permission of the Controller and when it is done, it should be in the presence of such officer.

Cotton Hosiery

The cotton hosiery industry in India has been adversely affected by an increasing shortage in the supplies of hosiery needles. In many places hosiery machines are stopped solely through absence of needles. Government is anxious that, as far as possible, hosiery production be restored to its former level and information is now being collected relative to the existing hosiery machines and the types and quantities of needles which are required for the machines.

The Government of India have, by a notification in the *Gazette*, directed that all persons possessing such machines should furnish details about the types and makes of such machines in use, the needles used by them, along with their productive capacity to the Textile Commissioner to the Government of India, Bombay.

Marine War Risk on Cotton Piecegoods

In order to facilitate movement, the Government of India have agreed to cover marine war risk on cotton piecegoods and yarn transported by sea from Bombay to Calcutta during the month of November to an extent of 25,000 bales only. Terms and conditions are the same as those which were operative before this concession was withdrawn as from 1st May 1944, i.e., war risk shall be as defined in the War Risks (Goods) Insurance Ordinance and the rules framed thereunder and shall be covered without charge while such goods are in transit on the sea provided that consignments have been insured prior to despatch by sea against marine risk with a registered insurance company or underwriter at the cost of the consignor or consignee as the case may be.

The Government of India's liability shall, in such cases, be limited to a sum which, in no case, shall exceed the sum insured under the marine policy. In respect of damage due to war risks, compensation will be paid by the Government in accordance with the War Risks (Goods) Insurance Ordinance. The Government of India will carry the war risks if the Textile Commissioner, Department of Industries and Civil Supplies, Hararwalla Building, Wittet Road, Ballard Estate, Bombay, has received a duly authorized copy of the marine insurance policy or a certificate issued by a registered insurance company or underwriter before shipment. Shippers must see that such a copy is despatched to the Textile Commissioner prior to shipment.

If a case arises where loss due to war risk has occurred before receipt by the Textile Commissioner of the authorized copy of a marine insurance policy or certificate, the shipper must prove that such a copy was despatched to Government before shipment before any claim can be considered. Under no circumstances will Government consider a claim where the shipper, consignor or consignee has not effected at his own cost marine insurance with a registered insurance company prior to the despatch by sea of the consignment concerned.

Control of Cloth and Yarn in the U.P.

It is learnt that the U. P. Government is considering the question of appointing a Textile Commissioner for United Provinces to regulate the working of the U. P. Cloth and Yarn Control Order and to deal with various problems affecting this trade and industry. The Provincial Government has viewed with concern the black marketing rampant in this province and continued attempts by manufacturers and dealers to evade the provisions of Cloth and Yarn Control Order.

Retail Price of Yarn : Textile Commissioner's Note

In reply to an inquiry as to the class of customers to whom yarn is to be sold at the maximum retail price, Mr. Ramnarayan Chellaram, President of the Bangalore Piecegoods Merchants' Association, has received the following communication from the Textile Commissioner, Bombay:—

"Regarding profit margins for sale of yarn, I have to say that the intention clearly is that the maximum margin of 15 per cent. should apply in cases where it is necessary in order for yarn to reach the ultimate consumer to pass through a number of hands. In such cases, it would normally be expected that the quantities bought by such customer would be small and in the nature of a retail sale. In case of powerloom factories and other organizations buying supplies in bulk, it is equally clear that they should be able to buy nearer the source of supply and at a margin not exceeding 3 per cent. and 7½ per cent. depending on the place of sale. The whole problem is under examination with a view to further clarification. Meanwhile, sales to consumers will be governed by the broad principles enunciated above."

East African Cotton Deal Falls Through

A conference was held in New Delhi on 20th October 1944, to discuss price and other details relating to the supply of the next season's East African cotton to Indian mills. A similar conference was held last year for the last season's cotton crop. Delegates from East Africa who attended the conference are Messrs. Clay, Parker and Colwings. Seth Kasturbhai Lalbhai, Mr. Krishnaraj Thackersey and Mr. Saraiya attended on behalf of the Indian cotton textile industry. Mr. Ramachandra, Acting Secretary, Commerce Department, and other officers represented the department. The latest conference was reported, however, to have ended in failure, as no agreement could be reached, thanks to the attitude of the East African delegation in regard to prices. It is stated that the African delegation proposed that India should buy 300,000 bales of cotton from East Africa and Sudan at Rs. 972 per candy. When the Indian delegates objected to this price on the ground that it was very high, the delegation was prepared to reduce it only to Rs. 900 and no further. The Indian delegation which first offered Rs. 792 is reported to have agreed to pay upto Rs. 800 and no more. This naturally led to a deadlock and the conference broke up without reaching any agreement.

While the African delegation is reported to have taken its stand on the ground that India purchased last year about 280,000 bales at the same price as was being demanded by it, the Indian delegation pointed out that the past year's deal was entered into by the Government of India without much scrutiny and that it was not fair to the Indian consumer to pay such an unreasonably high price. It was also pointed out to the African delegation that as East Africa received about 130 million yards of cotton goods from India, it would be in the interest of that country itself to supply cotton to Indian mills at reasonable prices. The Indian delegation was also constrained to remark that, should East Africa and Sudan be unwilling to supply cotton to India on fair terms, it would be obliged to curtail exports of textiles to them. None of these arguments seem to have moved the East African delegation. And there the matter now rests. The Government of India is reported to be examining it in the light of the discussions between the two delegations and may refer the matter to H.M. Government, with a request to persuade the Colonial Governments to supply cotton at reasonable prices, before deciding to withdraw the facilities in regard to exports of cotton goods which are allowed on the principle of reciprocity.

The stand taken by the African delegation seems to be quite unfair, remarks *Commerce*, and lacking in appreciation of the steps voluntarily taken by the Indian Government and the cotton mill industry to supply cloth to East Africans and others in the Middle East at reasonable prices. It is, indeed, a pity that the Government, before agreeing to supply cloth to that country, did not fix up a firm reciprocal arrangement for the supply of cotton by it to India.

OUR PERSONAL COLUMN

Mr. K. C. Mahindra, I.C.S., Chairman of the Indian Supply Mission in Washington, who had been invited by the Government of India to return to this country for consultation, was in Bombay to meet the Supply Member, Sir Ramaswami Mudaliar.

Mr. J. M. B. Gibbons has been elected to serve as the representative of the Bombay Chamber of Commerce in the Council of State in the vacancy caused by the acceptance of office in the service of the Crown in India by Mr. R. H. Parker. Mr. Gibbons was a former President of the Chamber.

The General Council of the All-India Trade Union Congress, at a meeting held at New Delhi, appointed **Mr. R. A. Khedgikar** and **Mr. Sudhindra Pramanik** to represent it at the World Trade Union Congress in London in January, 1945. They are in addition to Mr. S. A. Dange, already in Britain.

Dr. J. M. Kumarappa, M.A., S.T.B., Ph.D., Director and Professor of Social Economy at the Tata Institute of Social Sciences, Bombay, has been invited by the American State Department to be its guest during a tour of the United States. Dr. Kumarappa, who is the first Indian to be invited under the U.S. State Department's new programme of international and cultural co-operation, will leave India in the first week of December.

During his stay of five months in the United States, Dr. Kumarappa proposes to explore the scope of assistance he could get to work out the scheme formulated by him for the post-war expansion of the Tata Institute of Social Sciences and which was approved by the trustees of the Institute.

Dr. Kumarappa informed the representatives of the Press that his planned itinerary would begin with New York, taking him across the continent to California and the Middle West States, during which he proposed to visit the various institutions in the United States, where he said, teaching of applied social sciences was far more advanced than in most of the European countries. The institutions include those for the mentally deficient, for crippled children, for the deaf and dumb, courts for juveniles and domestic relations cases, modern institutions for the correction of juvenile delinquents, women and girls and advanced prison farms where "trustees" are on their honour bound not to escape.

The Government of India has invited the following Indian industrialists and business men to visit England and America, as soon as war exigencies permit, with the object of studying the present industrial organization of these countries, the technical advances made by them during the last few years, and their post-war industrial plans:

Messrs. J. R. D. Tata, G. D. Birla, Nalini Ranjan Sarker, Sir Padampat Singhania, Mr. Krishnaraj Thackersey, Seth Kasturbhai Lalbhai, Sir Sultan Chinoy, Mr. M. A. Ispahani, Mir Laik Ali, and Mr. A. D. Shroff.

The Executive Committee of the Andhra Chamber of Commerce, at a meeting held in Madras on 2nd October, have elected the following members to form a Post-war Reconstruction Committee: Messrs. C. Seshachalam, T. V. Ethirajulu Chetti, B. Ramachandra Reddi, G. D. Naidu, Chunduri Venkata Reddi, Puram Prakasa Rao, Vupputuri Venkata Punniah, M.L.C., B. D. V. Ramaswami and Appa Rao.

Mr. Jamnadas M. Mehta, M.A., LL.B. labour leader and a member of the Central Legislative Assembly, has been appointed the first representative of the Government of India in Burma. His headquarters will, for the present, be with the Government of Burma at Simla.

Mr. Mehta has no intention of resigning his seat on the Central Legislative Assembly at present, although he will have to relinquish his leadership of the labour movement. He is also a member of the Bombay Municipal Corporation. He was Mayor of Bombay for a year.

Mr. Mehta was a member of the Congress Party for over ten years. He was Finance and Revenue Member of the Government of Bombay for three months and a half, immediately after the introduction of the Reform under the Act of 1935. He represented Indian labour at the recent

International Labour Conference at Philadelphia.

Mr. Jamnadas Mehta has now resigned the presidentship of the Indian Federation of Labour.

Sir Chunilal B. Mehta, Kt. the well-known business man of Bombay, is the leader of the delegation of Indian business men, who attended the World Business Conference held in the U.S.A. in the middle of November. The other members of the delegation are: Mr. G. L. Mehta, Calcutta (Deputy Leader); Mr. Satya Paul Virmani, Amritsar, Mr. A. R. Siddique, Calcutta, Mr. J. C. Mahendra and Mr. David S. Erulkar. The delegates were assisted by Dr. P. S. Lokanathan, Editor, the *Eastern Economist*, New Delhi; Mr. M. A. Fazalbhoy and Dr. Jariwala of Bombay, and Mr. V. M. Bhatt, Assistant Secretary, Federation of Indian Chambers of Commerce and Industry, Delhi.

Mr. H. R. Gollan, the Australian Government Trade Commissioner in India, who is also Australian Member of the Eastern Group Supply Council, has left India for Australia for consultation with the Australian Government on matters relating to post-war trade and the development of reciprocal commercial relations between India and Australia.

While in Australia Mr. Gollan will have the opportunity of viewing the immense developments which have taken place in Australia's industrialization during the past few years. He will indicate to Australian manufacturers commercial outlets for their products in India, Burma and Ceylon, and advantage will also be taken, during this visit, to confer with chambers of commerce and manufacturers along these lines. The benefits which would accrue to all concerned as a result of two-way reciprocal trade will not be overlooked and interviews will be undertaken with Australian clients of Indian exporters to that end.

Prof. A. V. Hill, the British scientist, and Secretary to the Royal Society, who was recently in India on a five-month visit to this country, has been awarded the Medal of the Society of the Chemical Industry, London.

Sir Harry Railing, Chairman and Joint Managing Director of the General Electric Co., Ltd., has been elected President of the Institute of Electrical Engineers, England, for the year 1944-45.

He has been with the firm since 1905 and before joining them as chief of the test department at Witton, he had had some years of practical experience in works practice and management in the United States and on the Continent. In 1907 he went to the company's head office as technical assistant to the late Lord Hirst. Four years later he was elected to the board and at the same time appointed General Manager of the Witton group of works. He retained this position when he returned to Magnet House in 1933 to take over further administrative duties and he became Joint Manager in 1941. Upon the death of Mr. M. J. Railing in the following year he was appointed Vice-Chairman of the company and he succeeded Lord Hirst as Chairman and Joint Managing Director (with Mr. Leslie Gamage) in February last year.

Sir Harry Railing is also Chairman of the B.E.A.M.A. Council for the current year and he is a member of the Management Board of the Engineering Employers' Federation. He had previously served as Vice-President of the Institution for two years.

Cotton and Rayon Merchants' Association, Manchester.—At a recent meeting of the Executive Committee of the Grey Cloth Section of the Cotton and Rayon Merchants' Association, Mr. C. G. Hargreaves was re-elected Chairman of the section, and Mr. H. Crabtree, Deputy Chairman for the year 1944-45.

At a meeting of the Executive Committee of the Cotton Converters Section held on 21st August, Mr. H. Prince Bardsley was unanimously re-elected Chairman of the section for the year 1944-45. The full Committee is constituted as follows:—Messrs. H. Prince Bardsley, F. H. Beckett, S. Beddow, E. A. Carpenter, S. P. Dixon, H. Foster, F. Grundy, J.P., G. O. Mackenzie (Jun.), C. R. Johnson, A. H. Rains, and W. Speak.

Mill Staff News

Mr. H. J. Grindrod, formerly Manager of the New China Mills, has now taken up his former post of Carding and Spinning

Superintendent in the Madhusudan Mills, Ltd., Bombay.

Mr. V. H. Mehta, B.A., who was the General Manager of the Kalyanmal Mills, Ltd., Indore, in 1942, has now joined the Gendalal Mills, Ltd., Jalgaon, as General Manager. He has served for several years in different mills in Bombay and Ahmedabad as Manager and has specialized in cotton selection, etc., during his stay in Uganda and British East Africa where he was working for three years.

Mr. Nariman P. Munshi has left the Juggilal Kamlapat Mill of Cawnpore and joined the Lakshmi Ratan Cotton Mills, Ltd., Cawnpore, as Sizing Master.

Mr. S. R. Roy, A.G.W.I., is confirmed as Weaving Master in the Jam Manufacturing Co., Ltd., Bombay. He is a first class first diploma holder of the Bengal Textile Institute and also first class certificate holder of London City and Guilds in both cotton spinning and cotton weaving. He has worked in different capacities in the Rohit, New Cotton and Asarwa Mills, Ahmedabad, and the Shree Ram Mill, Bombay.

Obituary

Mr. William Wilkinson, O.B.E., F.T.I., Principal of Blackburn Municipal Technical College, and a leading authority on the textile industry in general and weaving in particular, passed away on 16th September. He was 62 years of age, and had been head of the College since 1925. In May 1943 he took the honorary appointment of technical officer in the Cotton Board's Recruitment and Training Department.

Mr. Sagarmall Mody, a leading yarn merchant, died in Jodhpur on 23rd October 1944. Trading in yarn, conducted under the auspices of the Yarn Merchants' Association, Bombay, of which he was the former President, was suspended for a day as mark of respect to his memory.

Mr. Amritlal L. Ojha

We regret to record the death of Mr. Amritlal L. Ojha at Calcutta on 18th October 1944. He was a leading business man of that city and a former President of the Federation of Indian Chambers of Commerce and Industries.

He was an elected member of the Bihar Legislative Council, President of the Bengal National Chamber of Commerce in 1928, President of the Indian Chamber of Commerce, Calcutta in 1933-34 and President of the Bihar and Orissa Industrial Conference in 1931.

He was keenly interested in labour problems, and has travelled widely in Europe. In 1930 he attended the International Labour Conference at Geneva as an Employers' delegate from India.

Mr. Ojha was also a former President of the Indian Chamber of Commerce, Indian Mining Federation, and the Colliery Owners' Association.

The Late Mr. Cawasji D. Panday

Portrait Unveiled at Bombay Textile and Engineering Association

A PORTRAIT of the late Mr. Cawasji D. Panday was unveiled on Tuesday the 31st October 1944 by Sir Homi Mehta, K.B.E., at the Bombay Textile and Engineering Association, Bombay. A large gathering was present.

Mr. D. N. Pavri, President of the Association, gave a brief account of the work done by the late Mr. Panday for the textile industry in general and the Textile Association in particular. He said that Mr. Panday had expressed a keen desire to be personally present at that function a fortnight before his death.

Mr. Pavri then requested Sir Homi M. Mehta to unveil the portrait.

Sir Homi Mehta narrated how he was connected with the late Mr. Cawasji D. Panday from his early days when he was only about 11 or 12 years old. His father was associated with Mr. Cawasji Panday and his father-in-law, Mr. Umrigar, was even a closer friend of Mr. Panday. Mr. Panday used to visit their house and, therefore, Sir Homi had opportunities of knowing him from his early childhood.

He then spoke about the services rendered by the late Mr. Panday to the mill and cotton industry. He said that Mr. Panday had, by dint of hard work and perseverance, risen from the rank of apprentice to the post of Manager, from which post he retired in 1906. Even after retirement, he wholly devoted his attention to the cause of those who worked in mills. In his retirement he visited Europe and, while there, he paid a special visit to Manchester to study its cotton manufacturing industry. When he returned to India, he did not take up service but, remaining a free man, gave the benefit of his advice and experience to many millowners in Bombay and elsewhere. The House of Thackersey was one of the first contacts of the late Mr. Panday and Sir Vithaldas Thackersey often took advice from him. Later on, Sir Homi said, the House of Petit requested Mr. Panday to

Photo: Eos Studios, Bombay

Group Photo taken on the occasion of the Unveiling Ceremony: Sir Homi Mehta, K.B.E., is seated in the middle.

Sitting from left to right:—Mr. G. N. Vaidya (Ruby Mills); Rao Sahib C. J. Soneji (E. D. Sassoon & Co.); Messrs. L. V. Patel (Madhowji Mills); H. F. Bamji (Dawn Mills); D. N. Pavri (Madhusudan Mills); Sir Homi Mehta, K.B.E.; Messrs. N. V. Modak, City Engineer, Bombay Municipality; Nariman F. Bharucha (Pralhad Mills); B. B. Joshi (Textile Directorate); Nandulal M. Mehta (Morarjee Goculdas Mills); Sohrab K. Khan (Textile Directorate).

join the Petit group of mills. Mr. Panday joined as superintendent of five or six mills of the Petit group in 1911. When the Great War broke out in 1914 the mill industry began to make huge profits, and Mr. Panday helped the management of the Petit group in the best way with his expert knowledge of the industry. He retired in 1927 as he was not, owing to advanced age, able to continue to shoulder the responsibilities of such a big group of mills. But, as Sir Homi said, during the time that Mr. Panday was connected with the House of Petit, the Petit group passed through its most prosperous times.

Mr. Panday, Sir Homi remarked, was active even in his retired life. He did not possess much wealth, yet, with great foresight he gave a handsome amount, the object of which was to promote the welfare of the mill workers as well as the interests of the industry.

In conclusion, Sir Homi said that Mr. Panday had done everything possible that an individual could do. He had devoted his life to the cotton and textile industry and he felt sure that his name will remain amongst the mill workers and millowners as long as the industry lives.

Sir Homi Mehta then unveiled the portrait.

Mr. B. B. Joshi and Rao Saheb C. J. Soneji, who proposed a vote of thanks to the chair, also spoke a few words about the late Mr. Panday.

Messages from some of the Life Members of the Association, viz., Sir Frederick Stones, Mr. Fakirji E. Bharucha and Mr. Neville Wadia were read at the meeting by Mr. H. F. Bamji, Honorary Secretary of the Association.

Institute of Textile Technology

Travancore University

MR. K. Kylas has been confirmed as Professor of Textile Technology in the Institute of Textile Technology, University of Travancore, Trivandrum. He holds the rank of a captain in the University Officers' Training Corps, and in view of his previous military experience, he has been made the Adjutant of the Corps.

Erection of a Spinning Plant

Thanks to the efforts of Mr. M. P. G. Nair, T.T.W.Fm. (Saxony), Spin. Tech. (Bohemia), the Principal, the institute was able to complete the erection of a newly purchased spinning plant which has started working.

Cotton Culture Research

Mr. M. P. G. Nair, in close collaboration with Messrs. K. Kylas, G. S. Ramakrishnen, and K. M. Mathew, has started the experimental cultivation of different varieties of cotton under ordinary conditions, to see the suitability of S. Travancore soil and climatic condition for cotton cultivation.

The Dean of the Faculty of Technology, Dr. D. L. Deshpande, has taken a very keen interest in this branch of technological studies, and the research section is indebted to him for this. The first bed of cotton plantation was sown by him.

Indigenous Dyes

Work is in progress on the utility of indigenous dyes of Travancore by Messrs. K. Kylas and T. V. Punnoose and an assay of their tinctorial values is also in progress.

Textile Technological Association

Dr. K. L. Moudgill, M.A. (Cantab.), D.Sc. (Glas.), F.I.C., delivered the inaugural address of the above association on " Research on Everyday Applied Science." Mr. M. P. G. Nair, T.T.W.Fm. (Sax.), Spin. Tech. (Bohem.), presided.

The Staff Club

Dr. D. L. Deshpande, Dean of the Faculty of Technology, Travancore University, has been unanimously elected as an honorary member of the club.

Commercial and Technical Organizations

The Millowners' Association, Bombay

Joint Examination Board in Chemical Engineering.—The Association has appointed Sir Sri Ram, Kt., as its representative on the Joint Examination Board in Chemical Engineering and Technology of the Association of Principals of Technical Institutions (India).

Textile Trade Marks Advisory Committee.—Mr. Dharamsey Mulraj Khatau, Mr. T. V. Baddeley and Mr. A. Pether have been appointed as the Association's representatives on the Committee for a further term of two years.

Holidays with Pay for Workers.—Towards the end of March, the Hon'ble Dr. B. R. Ambedkar introduced in the Legislative Assembly a Bill to further amend the Factories Act, 1944.

Briefly stated the amendment sought to: (*a*) provide for the grant of compensating holidays against the loss by worker of his weekly holidays as a result of any order or rule made under the Factories Act ; (*b*) confer on workers in perennial factories the benefit after a year's service, of at least seven consecutive holidays of which at least six would be paid for.

On the general question of granting to industrial workers annual holidays with pay, the Association felt that, while holidays with pay would increase the cost of production, there would be no corresponding benefit to the workers, who, it was thought, would take, as they always did, long holidays during the year to go to their villages, and therefore, the need for a paid holiday to provide for a certain period of absolute rest had not been made out.

Moreover, it was only in February 1944 that Government appointed a Committee to collect data on various labour matters, the intention being that on receipt of the required statistics, Government should appoint a Mixed Committee to formulate plans of social security. The Rege Committee had not yet completed their work, and the Committee of the Association expected that no measure of social security would be launched by Government until the Rege Committee had reported and until the Mixed Committee proposed by Government had gone into the whole question and submitted their recommendations.

Clause 1, sub-clause (2) provided that the measure shall come into force in a Province on such date as the provincial Government may notify. The Association did not understand why option in this matter should have been left to provincial Governments. It was of the utmost importance that there should be uniformity in this respect.

Proposed section 35(A) (2) empowered provincial Governments to make rules prescribing the manner in which compensatory holidays should be allowed. It was suggested in this connection that suitable instructions should be sent to provincial Governments to ensure that, before framing rules in this regard, the circumstances obtaining in individual factories or group of factories were taken into consideration.

Proposed section 49B laid down that holidays for a period of *at least* seven consecutive days should be allowed. The Association pointed out that it should be clearly understood that the period referred to was the maximum and not the minimum, and the words "at least" should be deleted. If this amendment were not made, it was quite conceivable that some provincial Governments might make it obligatory to grant more than seven days.

The expression "lock-out" used in the proposed clause was somewhat nebulous. Lock-out might follow an illegal strike, and it was necessary that it should be clearly laid down that if the closure of the factory was due to the illegal strike of the operatives, that should be regarded as a break of service.

It was also pointed out that the section did not describe the position of women workers on maternity leave, but it was presumed that women on maternity leave would not lose their right to annual leave.

Another point which the proposed Bill did not make it clear was the exact date on which leave with pay should commence. This was a very important matter and unless it was made clear that employers had the right to grant leave after consulting the exigencies of the factory, most of the employees would be asking for their annual leave during particular seasons of the year to the detriment of production in the factory.

The Bill did not contain any specific provision prohibiting a worker to accept any remunerative work when on a paid holiday, and it was pointed out that this defect should be remedied, as the object of the legislation might be defeated if the worker was free to accept other employment.

Formation of an All-India Handloom Board.—The Government of India appeared to hold the view that an All-India Handloom Board would serve a very useful purpose, and that its functions might include :—(*a*) Recommendations to the Government of India as to what proportions of the yarn available from Indian production should be supplied to each province and State interested in obtaining yarn for handloom weaving ; (*b*) assistance to handloom weavers through recognized associations or provincial or State authorities in obtaining dyes, chemicals and stores, etc., at fair rates ; (*c*) consideration of the best means of marketing Indian handloom products ; (*d*) directing research measures. This would be, in the main, organizing market rather than laboratory researches, and in this regard the Board would no doubt make use of the organizations already in existence in the several provinces and States. Consideration of measures to improve production would fall naturally within the Board's purview ; (*e*) the board would assist in the administration of the grant-in-aid from the Government of India.

As regards the constitution of the Board, the Government of India had made the following tentative suggestions :—Representatives of the provincial Governments and handloom industry, 15 ; representatives of States, 4 ; representatives of millowning interests and of the yarn trade (to be nominated by the Textile Control Board) 6, total 25.

The Government of India considered it highly desirable that closest contact should be maintained between the proposed Board and the Textile Control Board, and for this reason, suggested that the Textile Commissioner might be appointed Chairman of the proposed Handloom Board.

The proposal for the establishment of an All-India Handloom Board on the lines suggested by Government seemed to have emanated from the Fact Finding Committee (Handlooms and Mills) which was set up by Government early in 1941. At the twelfth session of the Industries Conference at which Government decided to appoint a Fact Finding Committee, the Honourable the Commerce Member who presided, assured the representatives of the industries present that the report of the Fact Finding Committee would be placed before the Conference again before further action was taken. On the other hand, neither the Government of India nor the provincial Governments appear to have considered the recommendations made in the report and formulated their decisions thereon ; it would appear that some time after the publication of the Fact Finding Committee's Report, a special officer was appointed by Government to report on the findings of the Fact Finding Committee. The suggestions of this special officer were considered by the representatives of Provincial Governments and States and the Handloom Committee of the Textile Control Board at Madras, and some of the recommendations of this conference had already been implemented as, for instance, reduction in the price of yarn. But the special officer's report did not seem to have been made available to any commercial organization in the country. In view of the undertaking given by the Honourable the Commerce Member immediately before the Fact Finding Committee was appointed, the procedure followed by Government in dealing with the Fact Finding Committee's report was unfair to the Indian cotton textile industry.

The position taken up by the Association was that the Fact Finding Committee, as the name suggested, was primarily concerned with the collection of facts. What Government now sought to do was to accept these facts as correct and give effect to the recommendations which, according to the Fact Finding Committee themselves, were in the nature of peace-time measures only. The establishment of an All-India Handloom Board, constituted as suggested by Government, and with the comprehensive terms of reference proposed, was calculated to result in recommendations, having as their background the present abnormal conditions created by the war.

The Association agreed that all reasonable assistance should be given to the handloom weaver to obtain his *bona fide* requirements of yarn at reasonable prices ; they further agreed that he should, if necessary, be given all possible assistance in marketing his cloth ; what they, however, emphasized was that the supply of yarn should be looked after by the existing Provincial Government organizations with the assistance of the Textile Commissioner, and as a matter of fact this procedure already seemed to have been followed in certain Provinces.

The problem of marketing did not afford any difficulty at present, and the handloom cloth which was not subject to any control as regards maximum prices was being sold more freely and at higher rate than Indian mill-made cloth. The Association, therefore, did not see any reason for the undue haste with which Government were seeking to give effect to the recommendations of the Fact Finding Committee without even consulting the interests concerned. The Textile Control Board with its appropriate sub-committees seemed to be competent to tackle the requirements of the handloom weaver in the matter of yarn, and the Committee emphasized that this arrangement should continue for the duration of the war, and that in the meantime Government should formulate their own conclusions with regard to the findings of the Fact Finding Committee and place them before the interests concerned for consideration.

The Handloom Committee of the Textile Control Board, on 12th October 1944, passed the following resolution by a majority :—"The Committee having considered the replies from provincial and State Governments is of the opinion that the Government of India should take early steps for the formation of an All-India Handloom Board on lines similar to those of the Textile Control Board."

The above resolution, it is understood, stands adjourned till the next meeting of the Textile Control Board.

Textile Stores and Machinery Merchants' Association, Bombay

Second Quarterly Meeting.—The second quarterly general meeting of the Textile Stores and Machinery Merchants' Association, Bombay, was held early last month with Mr. R. M. Nanavati, President, in the chair.

During the 2nd quarter the membership increased from 114 to 123, and the following matters were considered by the Committee: Bombay explosions ; appointment of sub-committees for different branches of the trade ; grant of general and particular import licences ; and imports of cotton ropes, bandings and spindle tapes and the claims of indigenous manufacturers for protection and encouragement.

The report mentions that the question of grant of general and particular licences was taken up with the Government of India, who informed them that the position in which importers, who in peace-time dealt not with U.K. but with countries which are now enemy countries, now find themselves, is merely a manifestation of ordinary commercial hazard. They exercised their judgment in a certain direction, their judgment had been proved to be faulty and as a result of the misjudgment they now inevitably find themselves at a disadvantage in comparison to their competitors. The Government did not agree that it would be fair and reasonable for Government to repair the effects of the mistaken judgment of such importers by introducing them by main force, as it were, into import channels already established.

The report further mentions that even though the Committee had submitted to the Textile Commissioner complete statistics regarding production and sales of cotton ropes and bandings and spindle tapes, he had turned down the request for stopping the imports of those materials.

The President, Mr. R. M. Nanavati, proposing the adoption of the report, observed as follows.

Referring to the post-war planning, Mr. Nanavati said :

"Both the U.K. and U.S.A. have kept plans ready to shift war-time industries into peace-time industries, for supplying civilian requirements of the world. Their idea is to ensure employment at home and capture foreign markets, and to absorb surplus stores that will be made by their expanded industries. The question is, are we free to plan for post-war large-scale industrialisation in the same manner? Mr. Dalton, President of the British Board of Trade, recently issued a five-point programme for the rehabilitation of the textile industry in Lancashire, suggesting amalgamation in spinning equipment, overhauling mercantile organization, extending double shift working and simplifying and modifying wage structure. The aim is to avoid the danger of the continuation of the pre-war shrinkage of output, exports, and employment, which would be a disaster to Britain.

"It is generally known that by double and treble shift working, our industry will get exhausted during the next few years, and will require replacements. It is estimated that our textile industry will have to replace 10 million spindles and 200,000 looms within 5 to 10 years after the war; for this the British textile mechanists will have to accommodate us, unless we have in the meantime made arrangements to have the necessary machinery made in India. Is it not possible to secure certain rights on royalty basis from the manufacturers in the U.K. to enable us to manufacture essential machinery in India, during the first five years of the post-war period. It has been whispered that part of the sterling balances may be liquidated by supplying old or reconditioned textile machinery and by supplying textiles produced by Lancashire, if any surplus is available. Both these factors may affect adversely the interest of our textile industry, and following after the present boom time, a very critical situation may have to be faced. We must not forget that our trade largely depends upon the prosperity of the textile industry.

"During the period of war, we have also started manufacturing certain parts of machinery and auxiliaries. We have made reconditioned spindles required by the textile industry. It is unfortunate that Government have recently instituted an order to the effect that only six firms are exclusively entitled to import and distribute spindles from U.K. manufacturers. They have done this on the pretext of preventing thefts of spindles being committed in the mills. This sounds very strange as in order to help the millowners, they have ignored the interests of Indian merchants and manufacturers, and have canalised the import trade in the hands of those six firms.

"There are about 500 merchants in the trade relating to this Association, of which only about 40 were issued licences as registered importers, and the rest were precluded from doing *inter se* trade or even agency business, in all the important controlled articles of mill stores. Already the majority of the merchants are wasting their time and eating up the profits that had accrued in the war period. Competition in the post-war period will be so keen that there would be no place left for middlemen. War-time machinery has been so organized as to bring producer and consumer together. The members of the Association should join together into a syndicate and start manufacturing mill stores and machinery, raising their own capital, bringing necessary technical aid from abroad, and utilising all their past experience.

"If we remain idle big business and foreign interests will take control of post-war industrialization. We should devise such means and methods as to make our existence safe in the post-war period. It is up to us to unite and create a central organization to produce and distribute mill stores and machinery."

The Vice-President, Mr. G. A. Kulkarni, seconding the adoption of the report, delivered the following speech :—

Import Trade in Future

"I will particularly lay emphasis on the important issue of import trade in general, which is more or less the mainstay of our business. As a whole the millstores trade is of appreciable size and most of the items included in this trade are imported. Most of us, being engaged in the import of various articles of millstores, have naturally to depend upon supplies from abroad and particularly from the U.K. There are very few items connected with our trade which are made or manufactured by indigenous industry. The situation, therefore, is this that if the pre-war conditions of free trade do not return and we are not able to obtain in sufficient quantities imported materials to trade with, we will naturally be reduced to great straits. Indications are not wanting that after the war the import trade will be controlled by foreign interests who will have their own distribution arrangements. There would be every endeavour to form powerful combinations, mergers, cartels, etc., and thus eliminate middlemen like us. Some of you may think that after war the U.K. is not the only source from which one can obtain his trade requirements but there also we may be disillusioned in our hopes and aspirations, as trade from countries of the continent of Europe may pass through U.K.—London being made the centre of distribution. To meet the perilous situation which may arise, the only remedy to my mind is to develop on scientific and well-organized basis whatever industry we may be able to build and to develop it irrespective of its size. Only thus may we be able to avoid to some extent at least the situation we found ourselves in during this and the last war.

"The two great wars, one of 1914 and the other which is being fought now, have made very little difference so far as industrial development, and with it the economic improvement of our country, is concerned. For all purposes we have to depend upon imports of all consumer or capital goods or both and we can hardly content ourselves with the situation decade after decade.

As a result of war activities we have seen the birth of some industries here and there and it is a question agitating our minds how many of these newly started industries will survive and how long, having regard to the attitude of the present Government. These industries are suffering from several handicaps such as want of technical assistance and guidance, appropriate equipment, scientific organization and so on. These being not available, only active sympathy of the Government will enable them to tide over their post-war difficulties.

"Only 73 firms have been given general import licences ; of these 27 are European firms and 46 Indian firms, while the actual position is that there are about 400 to 500 firms engaged in millstores trade and all these firms will have to look to their trade requirements to those firms who hold general import licences and if they are unable to secure adequate supplies, one has to imagine their plight in the trade.

"The policy adumbrated by the Textile Directorate in its Priority Note is all right. But, not only have no actual steps been taken to implement that policy but also the action taken under it is calculated to harm some of the small industries in our trade which have been flourishing with more or less success.

"The industry of cotton ropes, banding and spindle tape, etc., is capable of producing all the requirements of the textile industry in India. In spite of this imports in these items in huge quantities are encouraged, to the disadvantage of the industry, on the ground that the quality standard maintained by the industry is not of the same high level as maintained by makers abroad though it is said to have given satisfaction to the mills. The position of nearly 400 bobbin factories which came into existence during the war, makes very sad reading.

"Another point to which I should draw your attention is the possibility of our being forced to confine ourselves to certain limited markets. There is, it appears, a conflict of interests so far as trade and commerce is concerned between the U.K. and the U.S.A. and I fear certain markets in the world, from which we can secure our requirements of consumer or capital goods more advantageously, may not be available to us. It is worthwhile to give an instance here, i.e., imports of leather belting from U.S.A. After careful consideration a certain quantity of belting was allowed to be imported from the U.S.A. and necessary import licences were being issued. The U.K., however, found that it must maintain the monopoly of the belting trade and took prompt measures to ban imports of U.S.A. belting. On this there was a strong agitation in the U.S.A. as a result of which the Deputy United States Member of the Combined Production and Resources Board made a statement to the effect that India was free to import its belting requirements either from the U.K. or the U.S.A. Although this clarification has come from the U.S.A., there is hardly any clarification from the U.K. and the importers are not getting the necessary import licences to which they are entitled.

Spindle Control

The primary object of the Order under the Defence of India Rules regarding spindles is to check thefts of spindles. To my mind there is already adequate machinery and power which Government can use to check this menace. The dealers in this commodity are put to a lot of hardships and pecuniary loss due to the refusal on the part of the Textile Commissioner to issue necessary release orders for the sale and purchase of the quantities of spindles held in stock by them. This order is working adversely. A representation has been made and the result is awaited. The same is the case with the control order for nicklin tubes.

"On the Millstores and Priority Assistance Committee, the interests of our trade are not properly looked after. This is but natural. One man cannot obviously know the difficulties and problems of all the trades the Millstores and Priority Assistance Committee is called on to adjudicate upon. It is absolutely necessary that our trade must be represented on the Committee."

Officialese

The tongue that Shakespeare spake has thus been treated in an Order signed by an Assistant Secretary of the Board of Trade:—

"A manufacturer of controlled goods who has since the 31st day of July 1940, acquired any controlled goods from a manufacturer of controlled goods by virtue of the provisions of this Order or an Order revoked by this Order permitting the supply thereof to a manufacturer, shall not use those goods otherwise than in the manufacture of controlled goods or supply those goods otherwise than in circumstances in which he would be permitted to supply them if he had carried out a process in the manufacture thereof."

"In everything," as Wordsworth added, "we are sprung of Earth's first blood, have titles manifold." The title of "manufacturer of controlled goods . . . who has acquired any controlled goods from a manufacturer of controlled goods by virtue of an Order" (which may or may not have been revoked) ranks with the more illustrious of these new distinctions. Manufacturers of controlled goods have meanwhile to endeavour to live up to them.—*Mercantile Guardian.*

REVIEWS

An Introduction to Industrial Labour Welfare. By H. P. Oza and V. B. Kotdavala (with a Foreword by Prof. C. N. Vakil). Published by Sandesh Prakashan Mandir, Saraswati Bhuvan, Sarangpur, Ahmedabad. Price : Rs. 6-0-0.

Labour welfare is coming to occupy an increasingly important place in industry and the labour officer has been correspondingly gaining in status in the hierarchy of industrial organization. The book under review is the result of the joint labours of an academic professor and of a practical worker in the field of labour welfare, and attacks the problem of industrial labour welfare from a new angle.

Divided into three parts the book tackles in turn the subjects of the State and labour welfare, the worker in relation to welfare activities and the employer and his relation to labour welfare. The need of Governmental action, the existence of unionism and employer's farsightedness is taken for granted. Each of the three parts is appropriately taken up, first, with a statement of the theory underlying welfare ; secondly, a historical account of developments up to date ; and lastly, suggestions presented to the reader by the authors.

The book should be found a useful introduction to the subject of labour welfare. The inclusion of a chart illustrating the manifold duties of a labour officer only adds to its usefulness.

Investors' Encyclopædia 1944 (with **which is incorporated the Southern India Investor**), Ninth Edition. Compiled by Kothari and Sons, Share, Stock and Exchange Brokers, Armenian Street, George Town, Madras. Price: Rs. 15, post free.

This well-known annual reference book published in the South has now been greatly enlarged and for the first time details of all Indian companies of any importance are included in it. The omission of a few North Indian companies may have to be regretted, but it could not be avoided owing to the operation of the Paper Control (Economy) Order.

In the introductory section are included the rules and regulations of the Madras, Calcutta and Bombay Stock Exchanges; definitions of stock exchange terms, instructions for the guidance of the investor, and useful information for investors. Full particulars are given, among others, of banking and insurance companies, jute and cotton mills, and tea and rubber estates. Under cotton mills, details regarding directors and their qualifications, the managing agents and their remuneration, capital, share transfers, closure of transfer books and voting rights, and dates of closing accounts and paying dividends have been included. In addition, the number of spindles and looms in each mill is given, as well as a tabular analysis of working over a period of three or four years. The book should prove as usual to be a highly valuable reference book alike to the business man, economist and journalist.

NOTICE

Indian Chamber of Commerce, Calcutta: Annual Report for the Year 1942. Bulkier than the annual reports of several other chambers, the report under reference is full and comprehensive. It relates to the year 1942, was printed in 1943 and is released to the press in 1944. Highly valuable as a record of the trends and events of the year to which it relates and the reactions of the Indian mercantile community to them, it will be placed along with the reports of other chambers of commerce in the country.

Causes of High Dewpoint Temperature in Boiler Flue Gases. At a recent joint meeting of the Institution of Mechanical Engineers and the Institute of Electrical Engineers, London, Mr. W. F. Harlow, Wh.Ex., A.M.I.Mech.E., a member of the technical staff of **International Combustion Ltd., Derby, England** (Indian office: **International Combustion (India) Ltd.**, 9, Clive Street, Calcutta), presented for discussion a paper on the causes of high dewpoint temperature in boiler flue gases, which may be of interest to our readers, particularly regarding the sulphur content of Indian coals and subsequent troubles in the flue gas passes.

High dewpoint temperature in flue gases in boiler plants causes premature condensation in the cooler gas passages resulting in deposits and corrosion. Evidence is submitted to show, in the course of the paper referred to above, that high dewpoint can be caused by the increased temperature of the super-heater tubes, the oxide film catalysing the conversion of the sulphur dioxide formed by combustion into sulphur trioxide thereby increasing the sulphuric acid content of the gases. The trouble is confined mainly to plants fired by mechanical stokers, pulverized fuel plants generally being unaffected. Coating the catalytic surfaces with lime or fine pulverized fuel ash prevents the action and it is suggested that these materials sprayed on the tubes at intervals may prevent the formation of acid and its serious consequences.

Journal of Scientific and Industrial Research, Vol. III, No. 3, September 1944. A scientific discussion of the post-war industrial development of India is a feature of the September issue under notice of the *Journal of Scientific and Industrial Research*, just published. The scientific aspects of post-war reconstruction, which demand the attention of the Government and the country at large, include a survey of our material resources, formulation of operative plans for the promotion of basic and subsidiary industries, the nature and scope of co-ordination with foreign countries and the question of priorities, technical training and employment and exchange of foreign and Indian experts.

The article includes a set of charts showing the industries based on agricultural produce, animal products and minerals. A special chart gives a list of the industries which depend on coal as a raw material. The charts indicate, at a glance, the industrial potential of India.

Regarding the question of priorities, the article declares that the power industry deserves the pride of place. Plastics and non-ferrous metal industries should be given a high degree of priority. Basic chemicals and dyestuffs, heavy industries including machine-tool industry, bio-chemical and fermentation industries, building and structural engineering industries and the like should be developed.

Another article gives the data essential for the manufacture of a valuable group of intermediates, derived from the nitration products of chloro-benzene, for the dyestuff and pharmaceutical industries and for synthetic drugs and photographic developers.

The Hedge Contract System for Indian Cotton is the title of an article contributed by Dr. H. L. Dholakia, Ph.D., H. L. College of Commerce, Ahmedabad, to the July 1944 issue (Vol. XIII, Part I) of the *Journal* of the University of Bombay. After noting in brief the factors responsible for the institution of the new Indian Cotton Contract, the writer proceeds to describe its technique in order to enable the reader to appreciate the principles underlying it and its implications. Finally, he compares the old Broach and the new *Jarilla* contracts and comes to the conclusion that the latter is superior in technique and that it has several special advantages over the old one. Suggestions have also been made to improve the contract under the heads of increase of staple length and tendering differences. Dr. Dholakia also suggests that in the post-war period there should be a system of two hedge contracts for Indian cotton in Bombay, one for staple and another for non-staple descriptions, the Bengal styles being looked after by Karachi.

Work and Welfare in the Delhi Cloth and General Mills is the title of an illustrated pamphlet recently issued by the management of this well-known organization. The history of the growth of this company from very small beginnings in 1889 represents a rare record of benefits to workers in the shape of higher wages, better conditions of living and increased welfare. Each department in the mill elects its own Social Worker, who is paid Rs. 20 per month in addition to his regular earnings and who has direct access to the management; the scheme has been useful in establishing goodwill between the workers and the management. There is also provision for the appointment of two directors, one representing the workmen and the other its officers. It is believed that this is the only concern which has its employees on the directorate on an equal footing with the other directors. The Employees' Benefit Fund Trust of the mill was constituted in 1941 with the object of planning and promoting welfare work among mill labourers. The funds of the Trust now exceed Rs. 9,50,000, and the Trust's activities are divided under the heads of financial benefits, education, health, recreation and entertainment, and general amenities.

Anatomical Studies on Jute (Corchorus) with Special Reference to the Formation of Fibre (Indian Central Jute Committee Agricultural Research Memoir, No. 1). Price: Rs. 1-8-0 or 2*s*.

Though next to cotton jute is perhaps the most extensively used fibre, on the anatomical side practically no serious study was attempted, until quite recently Matthews (1924) has described certain microscopic characters of the ultimate fibres, which are useful in identification. A short note published by Nandi and Basu (1938) gives but an incomplete picture of the structure and development of fibres. Lately, Barker (1939) has thrown more light on certain aspects of fibre development and Kundu (1942) has brought out some new points which will be discussed later.

The present work, which was commenced before the publication of either Barker's or Kundu's papers, and briefly reported in the Annual Reports of the Indian Central Jute Committee, is mainly fundamental in its scope, though some commercial aspects have also been studied. For the first time, the root-stem transition and the differentiation of the vascular elements in the seedling have been followed in detail. The progressive development of the various tissues in the ontogeny of the stem has also been traced and an attempt has been made to bring out clearly the different anatomical features, starting from the seedling stage to the mature condition. A large portion of the paper is necessarily devoted to the study of the fibres, as they constitute the commercially most important part of the plant.

ACKNOWLEDGMENTS

Messrs. B. Thanawala & Sons Ltd., 47, Tamarind Lane, Fort, Bombay (manufacturers of cotton driving ropes and spindle tapes, tubular bandings, cotton bandings and spindle bandings) have sent us a useful tear-off wall calendar for the Hindu year which commenced with the latest *Diwali* celebrations.

Messrs. M. Best Cotton Rope Manufacturing Co. (Proprietors : M. J. Thanawala & Co.), 47-49, Forbes Street, Fort, Bombay, have sent us an illustrated wall calendar for the Hindu year which commenced with the latest *Divali*: the illustration is that of Lord Krishna and it is quite attractive.

TRADE LETTERS

(*From Our Special Correspondents*)

Ahmedabad

THE quota system adopted by Government, and in its wake by the local Maskati and Panchkuva Cloth Markets' Associations is eliminating a number of new merchants who are not eligible to any quota or whose quota is not sufficient to enable them to run their shops. The war boom had attracted a number of people, mostly relatives and friends of mill agents, to the cloth trade. They practically ousted the old traders who had to purchase cloth through them at highly inflated rates. The imposition of control merely created a plethora of black markets which could be suppressed by the restoration of the old trade channel and suppression of the new favourite channel.

The Government scheme of approved cloth shops is being enforced in Ahmedabad City. Two classes of shops are to be opened for the sale of cloth at a margin of 10 per cent. as against 20 per cent. permitted by Government for the ordinary trade channel. Very few old merchants are willing to apply for shops for coarser goods while the number of shops to be opened for finer goods is very limited. The public demand for finer goods is evidently insatiable here as elsewhere, while mills manufacturing finer goods are taking to manufacturing coarser goods as they find the latter more remunerative after the recent cuts in prices. Coarser goods are being increasingly dumped in the market although they are not wanted by the people. Some mills have definitely taken to lowering the quality of their products for which prices have been fixed by Government. Ahmedabad mills which dumped in the market heavily sized goods during the last war are now dumping inferior unwanted goods against which bitter complaints are being made but to no avail, unless Government intervenes and fixes prices according to the quality of different kinds of goods. Government will have also to revise prices, according to varying counts, so as to prevent mills switching over from finer to coarser goods. There is already shortage of finer goods which should not be allowed to be accentuated by mills seeking to manufacture more remunerative goods.

Apart from mill production which cannot be increased indefinitely, there are good prospects for increasing handloom production for which it is regrettable no systematic effort is being made. Mahatma Gandhi seems to contemplate a fast to stimulate the prosecution of the constructive programme including his favourite *khaddar* production. While Indian mills are eager to secure supplies of Egyptian cotton to produce finer counts Indian cotton is lying idle, hitting hard the Indian grower who is at a loss to dispose of it. It can be profitably turned into *khaddar* by hand processes which require man-power more than anything else. If the starving people of Bengal and other provinces had been organized for producing *khaddar*, their lives would have been saved, and the prevailing cloth famine appreciably relieved. It is not yet too late to move in this direction, as the war is likely to be unexpectedly prolonged.

Indian industries which have gained considerably from the present war will continue to bask in the sunshine till the war ends, and for some time after. If their development is planned they will stand post-war depression better. While the mill agents are able to take care of themselves and plan future development individually, the small factory owners of Ahmedabad have decided to plan collectively. They have recently formed an association which has decided to invite Sir Visvesvaraya to guide them in planning the manufacture of steel machinery which Indian industries will require after the war. They are at present supplying spare parts made of iron. Iron works which have sprung up during the war can be combined and turned into steel works after the war under expert guidance. Gujerat, which has attained an eminent position in cotton manufacture, is fast developing her primitive iron industry under the impetus of war. She can develop it into an efficient steel industry.

The Textile Labour Association, Ahmedabad, which has been foiled in its attempt to devise a scheme of compulsory savings for workers, who earn the highest dearness allowance in the country, has decided to open a co-operative bank for collecting their voluntary savings in order to finance various co-operative schemes for their betterment. The voluntary savings of about 120,000 workers of Ahmedabad who earn about Rs. 1,20,00,000 every month, if systematically collected, can amount to a big sum which can be utilized to their great advantage. The Labour Association was the first to start the Kasturba Memorial Fund which amounts to about Rs. 1,40,000. It has not been handed over to the All-India Fund, but kept separate for the workers of Ahmedabad. This will form the nucleus of labour welfare activities which the Labour Association intends to promote more vigorously than before. It has made repeated attempts in the past in this direction. It has started schools, hotels, co-operative housing societies, hospitals, etc. These activities will be intensified now when the workers are financially better off, and are frittering away their earnings in drink and other vices. After the unsuccessful attempt of the Congress Government to introduce prohibition in Ahmedabad, workers spent their earnings in drink and other vices. The Labour Association conducted a vigorous campaign against these vices which produced the desired effect. It is hoped that its welfare activities will meet with equal success for the lasting good of the workers who constitute the bulk of the population of an industrial city.

South India

Scarcity of Mill Cloth for "Divali"

PROSPECTIVE *Divali* purchasers in Madras were rather intrigued by the scarcity of mill-made cloth in cloth shops. It was thought that with the approach of *Divali* sufficient quantities of cloth would be arriving in the market from the various mill centres. But generally buyers found only hand-made cloth. Many shop-owners said that they did not get sufficient quantities, and that the cloth merchants generally elected to import only the hand-woven products which were priced at higher rates and at the same time provided a wider margin of profits.

Silk Supply to Handloom Weavers

A lengthy memorandum has been submitted to Mr. R. W. Targett, Director-General of Supplies, on behalf of the handloom and powerloom weavers in silk in Mysore State, which represented that the Government of Mysore had all along been encouraging cottage and home industries and as a result there were at present more than 5,000 handlooms and 1,000 powerlooms weaving silk, which had been now hard hit on account of the price of raw silk having gone up by 10 to 12 times. The memorandum further stated that since the Mysore Government were selling silk in public auction, the poor people engaged in cottage industries were unable to compete with rich merchants who bought silk in the auctions at high prices. Some of them were said to be coming even from outside the State. The memorandum urged that the Mysore Government should fix the maximum price of twisted silk at about Rs. 25 per lb. and that apart from their supply of silk to the Government of India for Defence purposes they should reserve certain quantity of silk for distribution to the handloom and powerloom weavers in the State. The memorandum expressed gratification that it was understood that maximum prices for silk were going to be fixed in British India and hoped that this would enable the Mysore Government to fix the prices of silk in the State at an early date and thus relieve the hardships of the handloom and powerloom weavers.

Cloth for Destitute Women

The Hyderabad Government have contributed Rs. 1 lakh for the supply and distribution of cloth to deserving women and children in the State. Cloth worth Rs. 20,000 has been set apart for distribution through the Hyderabad Women and Children's Medical Aid Association among the poor in Hyderabad City.

Mysore Mulberry Silk-worm Reared in Ceylon

The mulberry silk-worm has been reared for the first time in Ceylon as the result of a successful experiment carried out by the first Ceylonese to study sericulture in India, Mr. K. Ranganathan, who returned recently to Ceylon after a one-year course at the Government Silk Farm in Mysore.

The first lot of eggs which were brought from Mysore arrived in the Island some time ago hatched out in the normal period. The caterpillars built cocoons in due course, and silk-thread is now being reeled.

The ease with which the experiment has achieved success indicated that it is only the amount of mulberry leaf that is available that will limit the development of a cottage industry in Ceylon.

Receipts of Raw Cotton in Madras

The receipts of loose cotton at presses and spinning mills in the Madras Province from 1st February to 29th September 1944 amounted to 383,081 bales of 400 lbs., lint as against an estimate of 481,000 bales of the total crop of 1943-44. The receipts in the corresponding period of the previous year were 347,726 bales. 507,313 bales, mainly of pressed cotton, were received at spinning mills and 3,943 bales were exported by sea while 153,392 bales were imported by sea mainly from Karachi and Bombay.

Standardizing Shades of Yarn

With a view to standardizing the shades of yarn and fixing the cost of dyeing, Mr. S. Venkateswaran, Provincial Textile Commissioner, convened recently a conference of dyers in the Madras Province. Representatives from Guntur, Nellore, Madras, Madura, Conjeevaram and other places, who attended the conference, had a discussion with the Commissioner on the working of the scheme adumbrated by him in the matter of distribution of yarn and the classification of dealers, and nearly all of them stated that the scheme was giving entire satisfaction to the dealers and buyers. The Commissioner stated that it was proposed to license all dyers. It was resolved at the conference that the dyers should be treated as wholesalers in the matter of assessing the margin of profit. It was also decided that dyers should have no looms under their control.

Discussion then ensued regarding the practicability of fixing standard grades of colours and the dyeing charges. It was pointed out that it would be difficult to have uniform standards of colours, but that only a rough classification into fast colours and colours which might fade was possible. Some of the dyers stated that one dyer could not keep a uniform standard of dyeing always. It was decided that the dyers should keep shade-cards of the different colours used by them and also the charges for dyeing. The Commissioner requested the representatives to send to the office estimates of dyeing charges for different shades with a view to finding out whether any definite amount could be fixed.

Piecegoods Imports

Problems relating to import of piecegoods were discussed by the members of the Madras Piecegoods Merchants' Association on the 20th October, with Mr. F. M. Innes, Chief Controller of Imports.

The Association, in a memorandum presented to Mr. Innes, pointed out that Indian mills were hostile to importers and the quota system, now in force, disqualified importers from claiming a share in the Indian mill products. Claims of importers for import licences, it was urged, should be recognized and the licences granted in the case of those who during the evacuation period had failed to apply for them in time.

Mr. Innes said that the United Kingdom was at present unable to allow exports of cotton piecegoods to India. A very small quantity of high class goods was coming from the U.S.A. In the case of woollen piecegoods small quantities were being received from the United Kingdom. The case of rayon piecegoods was considerably more encouraging and although the United Kingdom was not able to supply large quantities they had been given a very satisfactory allocation from America. A quota for mixed rayon piecegoods had been fixed, based on past imports from all sources including Japan. This would give a share in the trade to firms whose previous connections were with Japan and other belligerent countries.

One member asked if in view of the fact that the Indian mill production had increased and in view of the improvement in the war situation the Government of India were not likely to place large war orders hereafter with the Indian mill industry and if it was proposed to place any restriction on the import of British piecegoods into India. Mr. Innes answered that he could not give any forecast of the Government's post-war import control policy.

Madras College of Technology

A site about 47 acres in extent, adjacent to the Engineering College, Guindy, Madras, has been selected for location of the Dr. Alagappa Chetti College of Technology recently inaugurated and now carrying on work in the Engineering College. It is gathered that arrangements will soon be put through for alienation by Government of lands in favour of the institution.

Cawnpore

New Rationing Scheme

THE U. P. Government's hundred per cent. rationing scheme in a certain number of selected towns and cities, it is now announced, will be enforced as from 1st February 1945. For the present rationing is to be enforced in 13 towns and some of the cities like Lucknow, Cawnpore, Allahabad, Benares and Gorakhpur. The quantities to be given are 8 *chhataks* (4 *chhataks* of wheat and 4 *chhataks* of rice). The labour classes and those given to manual labour will get 8 *chhataks* of rationed wheat or rice and 4 *chhataks* of unrationed gram.

Post-war Plans

The post-war plans of the Government are now complete. The first Five-Year Plan which they have chalked out comprises 158 schemes, involving an expenditure of Rs. 120 crores which will be spread over the whole of the United Provinces, and working out to about Rs. 22 *per capita* expenditure. Although most of the development schemes are calculated to benefit demobilized soldiers, about 14 special schemes have been formulated to meet their special requirements. The most important of the schemes comprise irrigation and allied hydro-electric projects which is to cost a capital expenditure of Rs. 25 crores. The production and generation capacity of power (hydro-electric) is to be about 48,000 kcw. and the peak capacity of five-year hydro-electric schemes is 296,250 kcw. The Plan also provides 14 industrial schemes, six were or are to encourage and foster small-scale cottage industries.

As a first step it is announced that the Government would send abroad 300 persons for training in industries, education, medical public health, electrical and mechanical training and co-operation, for carrying out post-war planning. And according to the tentative programme during the first year 32 persons, in the second year 63 and in the third year 66, fourth year 70 and fifth year 70 trainees will be sent. These persons will be mostly recruited from the fighting forces either at the front or in the army during the war. It will also be necessary to recruit some experts from Europe or America for handling complicated problems.

Cloth Control

A new scheme for equitable distribution of imported cloth throughout the province has been prepared by the Local Government. The Textile Commissioner to the Government of India has not accepted the suggestion of the U. P. Government that only persons nominated by them should be allowed to import cloth. The arrangement for the distribution of frozen cloth allotted for this province with dealers of Cawnpore has been extended up to the end of November 1944. It was in the first instance for a period of three months only from June to August, and supplies of 70,000 bales were intended for that quarter, and the operations for this period exceeded Rs. 50 lakhs. It is also learnt that the U. P. Government are considering the question of appointing a Textile Commissioner for United Provinces to regulate the working of the U. P. Cloth and Yarn Control Order and deal with various problems affecting this trade and industry. The Provincial Government has viewed with concern the black marketing rampant in the province and attempts by manufacturers and dealers to evade the provisions of the Cloth and Yarn Control Order. The appointment of this officer will be made with the object of placing cloth and yarn controls in the province on a proper footing and to start a province-wide drive to root out black market in this trade.

During the four months ending September 1944 the Textile Control authorities have either cancelled or suspended the cloth licences of over 900 dealers in the province, besides launching prosecutions against 470 dealers for breaches of either the Cotton Cloth and Yarn Control Order or the Provincial Licensing Order. During the month of September alone 100 dealers were prosecuted, 61 of whom being found guilty and sentenced to pay fines of varying amounts upto Rs. 2,000. Two partners of a firm were each sentenced to three months' rigorous imprisonment in addition to a fine of Rs. 1,000 for having charged 10 per cent. more than the ceiling retail price printed on the cloth.

The question of "Standard Cloth" has indeed become a problem, according to local opinion, both to the Government and the traders alike. Since last January, it is reported that thousands of standard *dhotis* and *saris* have been lying unsold in shops and godowns because they are either too short or too large. In some districts they were made into garments and then put up for sale but even then they could not be sold. In Lucknow alone the unsold stocks exceed 250 bales. The owner of a local Standard Cloth shop lamented: "We have seldom received the sizes we actually asked for. Instead of that we have received sizes which would fit either a dwarf or a giant."

Personal

Mr. J. E. Pedley, I.C.S., C.I.E., J.P., Labour Commissioner, United Provinces, for the past four years, has now been transferred and Mr. K. R. Malcolm, Magistrate and Collector, Allahabad, has been posted to Cawnpore as the new Labour Commissioner.

The Provincial Government has put in charge Mr. M. J. Rab, Assistant Director of Industries, to carry out an industrial and commercial survey of the United Provinces for post-war development.

Ahmedabad Advance Mills' Fairly Good Year

In his speech at the annual general meeting of the shareholders of the Ahmedabad Advance Mills, Ltd., in Bombay on Tuesday, the 24th October 1944, Sir Sorab Saklatvala, Kt., observed:—

"The year under report has proved a good one for the textile industry. In my speech last year I had made mention of the Cloth and Yarn (Control) Order which came into force from 17th June 1943. From August 1943 prices of cloth and yarn were controlled under that order, and thereafter reductions in prices were made from time to time, the last reduction being made as recently as September last.

"You must have seen from the accounts that your company has made a fairly good profit, but I would point out that though the gross profit for the year is higher than that of the previous year, the profit available for disposal is much less, a very large portion having been absorbed by taxation and compulsory E.P.T. deposit. You will notice that in spite of a profit of over Rs. 25 lakhs we have been able to carry only Rs. 4 lakhs to reserve which is approximately the amount of compulsory E.P.T. deposit for the year. This deposit, together with the deposits made for the years 1942 and 1943, amounts to Rs. 6,33,692, and this sum we shall have to our credit with Government, to be repaid to us one year after the termination of hostilities, or two years after the date of deposit, whichever is later. I need hardly tell you that we shall need all these reserves and even more to meet the expenses of post-war reconstruction when extensive replacements and renovations of our already over-taxed plant and machinery will have to be carried out.

"The coal situation had remained critical almost throughout the year and it is still causing us a great deal of anxiety. Short supplies and transport difficulties are constant features. In these circumstances, to avoid stoppage of the mills, we had to supplement our fuel by using high-priced firewood to a considerable extent. This accounts for the high fuel charges for the year mentioned in the report."

Fixation of Wages in Travancore

Bill to Provide for the Establishment of Trade Boards

THE Government of Travancore have recently published the Travancore Trade Boards Bill which provides for the establishment of trade boards "in such trades or branches of work in trades" as Government may from time to time direct. The Boards will report on any matter referred to them by Government with reference to the industrial conditions of the trade or class of trades for which they are formed, as also to fix a minimum rate of wages. The duties and powers of these Boards with respect to fixing the minimum wages are set out in section 6, which is reproduced below :—

"(1) Every Board shall, subject to the provisions of this section, fix a minimum rate of wages for time-work in their trade (in this Act referred to as 'a general minimum time-rate)' and may also fix for their trade—

(*a*) a general minimum rate of wages for piece-work (in this Act referred to as 'a general minimum piece-rate');

(*b*) a minimum time-rate (which shall not be higher than the general minimum time-rate) to apply in the case of workers employed on piece-work for the purpose of securing to such workers a minimum rate of remuneration on a time-work basis (in this Act referred to as 'a guaranteed time-rate'); and

(*c*) a minimum rate 'whether a time-rate or a piece-rate' to apply in substitution for the minimum rate which would otherwise be applicable in respect of hours worked by a worker in any week or on any day in excess of the number of hours declared by the Board to be the normal number of hours of work per week or that day in the trade in this Act referred to as 'an over-time rate.'

(2) Any of the minimum rates under sub-section (1) may be fixed so as to apply universally to the trade or so as to apply to any special process in the work of the trade or to any special area, or to any class of workers in the trade, or to any class of workers in any special process or in any special area.

(3) The power of a Board to fix the minimum rate of wages shall include the power to fix a series of minimum rates to come into operation successively on the expiration of specified periods, and the power to vary a minimum rate shall include the power so to vary a rate that the variation shall be operative only during a specified period.

(4) The expression 'minimum time-rate' includes the time-rate of any kind fixed under the provisions of this Act.

(5) If a Board report to Government that it is impracticable in any case to fix a general minimum time-rate in accordance with sub-section (1), Government may take such action as they deem fit.

(6) A Board may, if they think it expedient, cancel or vary any minimum time-rate or general minimum piece-rate fixed under this Act and shall reconsider any such minimum rate, if Government direct them to do so, whether an application is made for the purpose or not.

(7) A Board shall, on the application of any employer, fix a special minimum piece-rate to apply as respects the persons employed by him in cases to which a general minimum time-rate or a piece-work basis time-rate but no general minimum piece-rate is applicable, and may as they think fit, cancel or vary any such rate either on the application of the employer or after notice to the employer, such notice to be given not less than one month before the cancellation or variation of any such rate.

(8) Before fixing, cancelling or varying any minimum rate of wages, not being a special minimum piece-rate, the Board shall give notice of the rate which they propose to fix, or of their proposal to cancel the rate, or of the proposed variation in the rate, as the case may be, and shall consider any objections to the proposal which may be lodged with them within two months from the date of the notice.

(9) Where a Board fix a special minimum piece-rate under sub-section (7) or cancel or vary any rate fixed under the said sub-section, they shall give to the employer notice of the fixing, cancellation or variation as the case may be."

The following Statement of Objects and Reasons is published with the Bill:—

"The Board constituted by Government to inquire into and investigate the conditions of labour in the State with a view to settling disputes on a conciliation basis, in their report have recommended to Government the desirability of fixing minimum wages with the assistance of a wage-fixing machinery constituted on a statutory basis and functioning on the lines of the British Trade Boards. Government, after carefully considering the recommendations and representations, are satisfied that it is necessary in the interests of labour that proper machinery for fixing wages on a statutory basis should be constituted. Hence the Bill.

The Bill, though drawn largely on the lines of the British Trade Board Acts of 1909 and 1918, contains a few additional provisions. The main feature of the Bill is that it provides for the establishment and constitution of Trade Boards for those trades to which the Bill applies and the introduction of minimum rates of wages for workers engaged in such trades. The Trade Board will be constituted by the Government and will consist of five members nominated by them, two of whom to represent the employers in their trade and two to represent the workers in their trade. The Chairman of the Board will be an officer of the Government. The Board has power to fix minimum rates of wages for workers both on time-work basis and on piece-work basis. Different rates may be fixed for different trades and for different classes of workers. They have also power, on their own initiative or on application made to them, to cancel or vary any minimum rate fixed by them. The rates fixed, varied or cancelled by the Board will take effect only on confirmation by the Government. An employer who does not pay wages in accordance with minimum rates shall be liable on conviction to a fine which may extend to two hundred rupees.

Indian Mill Finance

Working of Textile Companies

Sir Shapurji Broacha Mills, Ltd., Bombay

(Agents : The Provident Investment Co., Ltd.)

The trading profit of the company for the year ended 31st March, 1944 is Rs. 1,03,70,927-9-4 from which have been deducted the provision for income-tax, corporation-tax and excess profits tax of Rs. 76,59,889, and provision for compulsory deposit (estimated amount required for compulsory E.P.T. Deposit) Rs. 18,40,000. Adding the balance, after adjustments, of the amount carried forward from previous year of Rs. 20,83,666-10-9 the balance available for disposal is Rs. 29,54,705-4-1. The directors recommend the disposal of the same as under : To write off for depreciation on buildings Rs. 1,75,000, machinery Rs. 1,35,000, electric power installation Rs. 8,000, sprinklers Rs. 500, humidifiers Rs. 2,000, motor wagons and car Rs. 100 and furniture Rs. 200; to place to reserve fund Rs. 15,00,000 ; to take to dividend equalization fund Rs. 1,00,000 ; to pay dividend for the year ended 31st March 1944, at 10 per cent. free of income-tax on 82,036 conversion shares Rs. 8,20,360; on 152,319 deferred shares Rs. 38,079-12-0 ; to take to workmen's welfare fund Rs. 40,000 ; staff welfare and gratuity fund Rs. 25,000 and to carry forward to the next account Rs. 1,10,465-8-1.

The amount paid by way of dearness allowance and included in the item of mill establishment and mill wages is Rs. 19,39,578 for the year. Rs. 3,14,124 have also been paid to mill workers as war bonus for the year 1943.

The company's buildings, machinery and stock and stock-in-trade have been insured for Rs. 1,70,89,161, against fire.

The company's profits and standing charges have been insured against stoppage by fire and riot for a period of three years indemnity for Rs. 2,00,00,000.

The company's buildings and machinery have been insured under War Risks (Factories) Insurance Ordinance 1942 and stock and stock-in-trade have been insured against riot and civil commotion risks and also covered under Government War Risks (Goods) Insurance Scheme.

Central India Spinning, Weaving and Manufacturing Co., Ltd., Nagpur

(Agents : Tata Sons Ltd., Bombay.)

The profit for the year ended 30th June 1944 after making a provision of Rs. 6,00,000 for depreciation and of Rs. 73,50,000 for taxation, amounts to Rs. 19,57,541. Adding thereto the balance brought forward from the accounts of the previous year Rs. 37,641 the total comes to Rs. 19,95,182. Deducting therefrom the amount paid as *ad-interim* dividends, free of income-tax, for the half-year ended 31st December 1943 on preference shares at Rs. 12-8 per share Rs. 1,25,000 and on ordinary shares at Rs. 10 per share Rs. 4,68,750, and also taking to the reserve fund Rs. 7,75,000 a balance of Rs. 6,26,432 is left which the directors recommend be appropriated as follows :—Payment of final dividends, free of income-tax, for the year ended 30th June 1944 on preference shares at Rs. 12-8 per share Rs. 1,25,000 and on ordinary shares at Rs. 10 per share Rs. 4,68,750 leaving to be carried forward Rs. 32,682.

The workers of all mills in C.P. and Berar went on a strike demanding higher basic wages and higher dearness allowance. This mill was also affected by the strike which lasted for about 2½ months.

The properties of the company at Nagpur and other places and the stocks have been insured against fire and riot risks for Rs. 3,57,85,256. Profits and standing charges have been insured against fire and riot risks for Rs. 85,00,000 per annum, indemnity being payable for 24 months. Insurance has also been taken under the War Risks (Factories) Insurance Ordinance for Rs. 1,53,79,400. Under the War Risks (Goods) Insurance Ordinance, all insurable stocks were kept fully covered throughout the year.

Mysore Spinning and Manufacturing Co., Ltd., Bangalore

(Agents : N. Sirur & Co., Ltd., Bombay)

The result of the company's operations during the year ended 29th February, 1944 shows a profit of Rs. 45,77,339-12-10 which with Rs. 13,29,608-4-11 (inclusive of provision for taxation) brought forward from the previous year's account makes a total of Rs. 59,06,948-1-9. From this sum the directors have declared an *ad-interim* dividend of Rs. 2 per share and bonus of Rs. 4 per share on 29,802 shares absorbing Rs. 1,78,812 and have allocated to provision for taxation Rs. 24,00,000 ; depreciation on buildings Rs. 1,00,000 ; depreciation on machinery Rs. 2,00,000 ; reserve fund Rs. 20,00,000 and labour colony fund Rs. 3,00,000 ; leaving a balance of Rs. 7,28,136-1-9. The directors propose to dispose of same as under :—Final dividend of Rs. 4 per share and a bonus of Rs. 4 per share for the year on 29,802 shares of Rs. 50 each (making a total of Rs. 14 per share for the year or 28 per cent. per annum) Rs. 2,38,416 ; bonus to company's staff at Bangalore Rs. 23,000 ; and to carry to next year's account Rs. 4,66,720-1-9.

With a view to strengthen the financial position of the company the directors have under consideration a scheme to increase the authorised capital of the company from Rs. 15 lakhs to Rs. 50 lakhs by the creation of further 30,000 ordinary shares of the face value of Rs. 50 each and 40,000 preference shares of the face value of Rs. 50 each, and subject to consent of Government being obtained in that behalf, to issue as fully paid up, 14,901 cumulative preference shares by capitalizing Rs. 7,45,050 out of the reserve fund of the company. These cumulative preference shares will carry a fixed preferential dividend of 4½ per cent.

The mill property and stocks are insured for the sum of Rs. 1,04,40,630 and the profits and standing charges for Rs. 45,00,000 for 24 months' benefit, that is Rs. 22,50,000 annually. In addition, the company's buildings, machinery, stock and stores have been insured against war risks as required by the Government of India Ordinances and the War Risks Insurance Emergency Act of the Government of Mysore.

Ahmedabad Advance Mills, Ltd., Ahmedabad

(Agents : Tata Sons Ltd., Bombay)

The profit for the year ended 30th June 1944 after making a provision of Rs. 1,33,000 for depreciation and of Rs. 17,80,000 for taxation, amounts to Rs. 6,33,343. Adding thereto the balance brought forward from the accounts of the previous year Rs. 22,716 the total comes to Rs. 6,56,059. Deducting therefrom the amount paid as *ad-interim* dividends, free of income-tax, for the half-year ended 31st December 1943 on preference shares at Rs. 2-8 per share Rs. 25,000 and on ordinary shares at Rs. 8 per share Rs. 80,000 and also taking to the reserve fund Rs. 4,00,000 a balance of Rs. 1,51,059 is left which the directors recommend be appropriated as follows :—Payment of final dividends, free of income-tax, for the year ended 30th June 1944 on preference shares at Rs. 2-8 per share Rs. 25,000 and on ordinary shares at Rs. 10 per share Rs. 1,00,000 leaving to be carried forward Rs. 26,059.

During the year under report the company received, in full repayment of its holding of the debentures of the value of Rs. 7,11,600, a sum of Rs. 5,31,600 in cash, at the rate of Rs. 443 per debenture, and Rs. 1,80,000 in redeemable preference shares, bearing cumulative interest at 4 per cent. per annum. A sum of Rs. 14,737 has also been received for interest due on the debentures for the year 1943, at the rate of Rs. 16-9-9 per debenture less income-tax.

The company's buildings, machinery and stocks have been insured for Rs. 1,26,59,000. Profits and standing charges have been insured for a sum of Rs. 25,00,000 per annum, the indemnity being payable for 24 months. Insurance has also been taken under the War Risks (Factories) Insurance Ordinance for a sum of Rs. 50,51,500. Under the War Risks (Goods) Insurance Ordinance all insurable stocks were kept fully covered throughout the year.

Bangalore Woollen, Cotton and Silk Mills Co., Ltd., Bangalore

(Agents : Binny & Co. (Madras) Ltd., Madras)

The result of the company's working for the six months ended 30th June 1944, after allowing Rs. 4,04,776 for depreciation is a profit of Rs. 3,96,711-1-10 to which is added the unappropriated profit brought forward of Rs. 56,488-3-6 making a total of Rs. 4,53,199-5-4. Out of this the directors have made a payment of dividend at Rs. 3 per share on the 6 per cent. cumulative preference shares for the half-year ended 30th June 1944, free of income-tax of Rs. 18,000 and propose to deal with the balance as follows :—To pay a dividend of Rs. 6-4 per share on the ordinary shares for the half-year ended 30th June 1944 at the rate of 12½ per cent. per annum, free of income-tax Rs. 1,26,562-8 ; to workpeople's housing reserve Rs. 30,000 ; to officers' retiring fund Rs. 15,000 ; to fire, accident and insurance reserve Rs. 30,000 ; and to carry forward Rs. 2,33,636-13-4.

Cawnpore Textiles, Ltd., Cawnpore

(Agents : Begg, Sutherland & Co., Ltd.,)

The working of the company for the half-year ended 30th September, 1943, after providing for taxation, shows a profit of Rs. 7,20,615-5-5 from which has been deducted debenture sinking fund Rs. 6,250 ; depreciation Rs. 1,00,000 and general reserve Rs. 2,49,685-13. Adding the carry forward from the previous half-year of Rs. 1,03,309-14-9 the credit of profit and loss account is Rs. 4,67,989-7-2. The directors recommend that this balance should be disposed of as follows :—In payment of a dividend of As. 8 per share for the half-year ended 30th September, 1943 Rs. 3,00,000 and to carry forward Rs. 1,67,989-7-2.

Delhi Cloth and General Mills Co., Ltd., Delhi

(Managing Directors: Sir Shri Ram and Lala Shankar Lall)

The profits of the company for the year ended 30th June 1944, after setting aside Rs. 13,00,000 for depreciation (as estimated for income-tax purposes), Rs. 4,65,000 for the estimated remuneration of the Managing Directors and Rs. 1,35,00,000 to the taxation reserve, come to Rs. 46,04,003-1 which, together with Rs. 1,61,645 brought forward from the preceding year, makes up Rs. 47,65,648-1.

The directors recommend that the above amount be disposed of as follows:—Dividend on ordinary shares of the face value of Rs. 25 each at Rs. 3 per share and a bonus of Re. 1 per share, making Rs. 4 in all Rs. 19,77,644; proportionate dividend and bonus on ordinary share of Rs. 2-8 each Rs. 16,000; proportionate dividend and bonus on partly paid up shares Rs. 749-4; dividend on preference shares Rs. 90,000; charity Rs. 1,00,000; dividend equalization fund Rs. 7,00,000; general reserve Rs. 17,00,000; and carried forward Rs. 1,81,254-13.

The deposits in respect of excess profits which have been made with Government up to the 30th June 1944 relating to the profits up to the year ended 30th June 1943 amount to Rs. 38,52,247.

The fall in profits is due to lower prices of textiles and also to some extent higher dearness allowance.

All the factories worked peacefully during the year and relations with labour were on the whole cordial. There was acute labour shortage in all the factories as a consequence of the enormous demand from Government for labour, chiefly in connection with public works.

The mill engineers, without any outside help, very successfully changed over Mill No. 2 in Delhi from the old engine drive to the new turbo-electric drive. The change-over will give a substantial recurring reduction both on wages and on coal.

During the last five years, it has not been possible to replace certain machinery which was due for replacement, but all possible steps have been taken to keep the machinery in the highest state of repair that is possible under the extremely difficult conditions prevalent now.

NEWS OF THE MONTH

Indian

Cotton Consumption in Textile Mills.—The Indian cotton textile industry consumed 347,283 bales of Indian cotton in August 1944 as compared with 377,394 bales in the same month in 1943. The total consumption of Indian cotton by the industry during the cotton year ended 31st August amounts to 4,116,525 bales as compared with 4,306,831 bales in the preceding year.

Indian Labour Delegates Return.—Mr. V. B. Karnik and Miss Maniben Kara, members of the delegation of the Indian Federation of Labour, have arrived in Bombay, after an extensive tour of Great Britain lasting over four months. During their stay they studied conditions of labour in England, and the facilities provided to English labourers by the British Trades Union Congress. The third member of the delegation, Mr. M. A. Khan, returned to India a few days earlier.

Horniman Golden Jubilee: Appeal for Funds.—Sir Chimanlal Setalvad, Kt., Chairman, Horniman Golden Jubilee Committee, has appealed for funds to celebrate the completion of fifty years in journalism by the veteran journalist, Mr. B. G. Horniman. Mr. Horniman came to India in April 1906 and since then he has made India his motherland. It is proposed to commemorate his services to this country in a befitting manner and for this purpose donations may be sent to Mrs. Bapsey Sabavala, Joint Honorary Treasurer, The Horniman Golden Jubilee Committee, Industrial Assurance Building, opposite Churchgate Station, Bombay.

Indian Cotton Piecegoods for Egypt.—The Egyptian authorities have applied to the Government of India for permission to export from India to Egypt a quantity of tea and of cotton piecegoods, according to Egyptian commercial circles in Bombay. They understand that no reply has yet been received. "There is no cloth in the shops in Egypt, and people cannot even buy new cloth to bury the dead, as is the custom. The poor people are feeling the scarcity of cloth and of tea very keenly," said an Egyptian business man to a Press representative.

Textile Calendar

OCTOBER

25th, Wednesday:

Association of Indian Industries, Bombay, First Quarterly General Meeting.

31st, Tuesday:

Bombay Textile and Engineering Association, Unveiling of Portrait of the late Mr. Cawasji D. Panday by Sir Homi Mehta, K.B.E.

NOVEMBER

10th, Friday:

Indian Merchants' Chamber, Bombay, Quarterly General Meeting.

V. J. T. Institute, Textile Association, lecture on "Some Aspects of Recent Research Work at the Institute," by Prof. D. F. Kapadia, B.A., M.Sc. (Tech.), at Electric House, Fort, Bombay.

22nd, Wednesday:

Association of Electricity Undertakings, Bombay Province, Fourth General Meeting, Electric House, Colaba, Bombay.

Bombay Textile Workers' Demand.—A bonus equal to three months' wages for 1944 is demanded on behalf of the textile workers in Bombay City by Mr. S. G. Patkar, General Secretary, Bombay Girni Kamgar (Red Flag) Union, in the course of a statement to the Press. Mr. Patkar says that the industry has earned unprecedented profits during the current year and that the workers have agreed to the staggering of holidays and averted the shortage of cloth by not going on strike to enforce their last year's demand for three months' bonus.

Foreign Markets for Indian Goods: Procedure for Making Trade Inquiries.—Firms and individuals in India sometimes address Indian Trade Commissioners overseas for information relating to foreign markets for Indian goods. In order to avoid delays which such a course invariably involves, they are advised to approach the

Director of Commercial Intelligence, No. 1, Council House Street, Calcutta, who is fully equipped to furnish such information from his records.

Firms in India are also advised to address their requests for trade introductions to firms in foreign countries to the Director of Commercial Intelligence who will forward them to the Indian Trade Commissioners concerned with his recommendation and such particulars regarding the firms as may be required for the consideration of these requests.

Annual Bonus for South Indian Workers.—At a recent meeting of the Southern India Millowners' Association, held at Coimbatore, Dewan Bahadur C. S. Ratnasabapati Mudaliar presiding, it was resolved to recommend to member mills that an annual prosperity bonus be paid, equivalent to three months' basic wages only actually earned, calculated as one-fourth of the total earned wages during the previous 12 months ending 31st August 1944. In spite of the fact that the trade conditions during the current year have not been as prosperous as those of the last year, the Association's decision to increase the annual bonus to three months, as against two months' paid last year is purely with a view to having some future savings for the worker and it is recommended that this additional one month's wages be saved for the worker in the form of either War Savings Certificates or as share capital in co-operative and any other registered credit society attached to the mill and each mill shall pay in cash two months' wages only.

Industrial Stoppages in British India : Decrease in Number of Workers Involved.—One hundred and nine industrial stoppages involving 92,481 workers occurred in British India during the fourth quarter of 1943 as against 148 stoppages involving 147,057 workers during the same quarter of the previous year. The total number of man-days lost was 293,961 as against 585,833.

There were only three stoppages involving 5,000 or more but less than 10,000 workers and in no stoppage 100,000 or more man-days were lost.

Textile (cotton, silk, woollen and jute) mills accounted for 40 per cent. of the number of stoppages, 72 per cent. of the workers involved and 66 per cent. of the man-days lost. In 55 stoppages or 50 per cent. of the total, the demands related mainly to wages or bonus.

The number of stoppages in which the workers were wholly or partially successful was 59 or 57 per cent. of the total number of stoppages which ended during the quarter and in 38 per cent. the workers were wholly unsuccessful.

Intensification of Research : Bombay University's Move.—The Bombay University's Department of Chemical Technology is strengthening its research organization and has ordered part of the equipment for its newly started Food and Drugs Section and for additional sections dealing with oil, fats, soaps, plastics, paints and varnishes. Research into pharmaceuticals and fine chemicals also will be developed.

More than Rs. 2,50,000 are to be used for a pilot house plant for the study of processes employed in the conversion of coal-tar raw materials into dyes, the construction of a laboratory for advanced research in textile chemistry, and the study of modern methods of finishing textiles. Such problems as anti-creasing, waterproofing, and shrink-proofing, and the imparting of other special effects to cotton fabrics, are also to be studied. There will be two research assistantships, so that the work may be carried out continuously.

Among the experiments recently completed are the bleaching of silk fabrics, tests of the fastness of khaki dye, and examination of used photographic solutions for recovery of the chemicals.

The University is considering the starting of research courses in history, politics and anthropology.

Indian Jute Industry in 1943-44.—The jute year 1943-44 was distinguished by three important features, namely, the large American order for 70,000,000 yards of hessians, the fixation of maximum prices by the Indian Jute Mills' Association and later fixation of maximum and minimum prices by Government; and a change in the seasonal pattern of activities, according to the Indian Central Jute Committee Bulletin of September.

The output of raw jute during the year was 70 lakh bales, 20½ lakh bales less than the previous year's production. Exports of raw jute amounted to 9.7 lakh bales compared with 12 lakh bales in the preceding year. The Indian Jute Mills' Association turned out a total supply of 2,668 million yards of cloth of all kinds. This output was less than that of the previous year by about one-third. The decline was mainly in hessians and caused by coal shortage and other difficulties. Exports of manufacture were smaller than last year. The fall was experienced mainly by hessians which fell from 1,528 million yards to 1,095 million yards while sackings registered a decline of 66 million yards from 368 million yards. Prices of both raw and manufactured jute were influenced by the fixation of ceilings, first by the Jute Mills' Association and later by Government. They were on the average higher than in the previous year. Manufactured jute prices, however, went through somewhat smaller variations than raw jute prices with the consequence that the average ratio between the two was higher in the year under consideration than in the previous year.

V. J. T. Institute: Expansion of Mechanical and Electrical Departments.—The first batch of additional students are expected to begin training shortly under the newly sanctioned expansion scheme for the Victoria Jubilee Technical Institute, Bombay, the oldest institute of its kind in India.

The scheme will run for five years in the first instance and total expenditure will be over Rs. 10 lakhs. The Mechanical and Electrical Engineering Departments of the Institute will be expanded so that a 50 per cent. addition can be made to the number of students under training in either department.

Provision is made for buying special equipment for the mechanical and electrical engineering laboratories and workshops as well as for additional space and staff. Sanction has also been given for the establishment of a high tension laboratory.

The scheme thus has a twofold objective —the training of more students and increased facilities for the type of training which will be most useful in the immediate post-war period.

The Institute's expansion is, of course, related to the Bombay Government's post-war development plans, the first stage of which includes the training of the large body of qualified men who will be needed to carry out the work.

In the selection of students priority will be given to those returning from war service in the Army, Navy and Air Force. A number of free studentships will be made available and Government will have priority in claiming the services of students after they have completed their courses.

Industrial Research Committee Record Evidence in Bombay.—The Industrial Research Committee, presided over by Sir Shanmukham Chetty, appointed by the Government of India to investigate and report on the facilities for industrial research in India, recorded the evidence of Mr. B. J. Wadia, Vice-Chancellor of the University of Bombay, Dr. K. Venkatraman, head of the Department of Chemical Technology, Mr. G. R. Paranjpe, Principal of the Royal Institute of Science, and Dr. Mata Prasad on facilities for industrial research in the institutions in Bombay.

Problems of a general strengthening of the scientific departments of the universities and scientific institutes of university rank, questions relating to the establishment of administrative machinery for guiding and co-ordinating industrial research, and the setting up of a Bureau of Standards under the central organization for industrial research were also discussed by the committee.

In the afternoon, the Committee met representatives of the Indian Merchants' Chamber and the All-India Manufacturers' Organization including Mr. M. A. Master, Vice-President of the Chamber, and Mr. Sankalchand G. Shah, Vice-President of the Manufacturers' Organization.

The Committee also heard Mr. G. N. Mitter, Chief Assayer of H.M.'s Mint, Bombay, and Mr. K. N. Mathur, Assistant Director, National Physical Laboratory.

The members of the Committee paid a visit to the Technological Laboratory of the Indian Central Cotton Committee at Matunga, the Haffkine Institute, Parel, and the Department of Chemical Technology, Matunga.

Facilities for Training at the Technological Laboratory, Matunga, Bombay.—As in the past, the Technological Laboratory of the Indian Central Cotton Committee at Matunga, Bombay, will admit this year a maximum of four students for training in the elements of spinning and routine methods of testing cotton fibre and yarn. Preference will be given to those employed in the cotton trade or textile industry who must at least be matriculates of a recognized university; for others minimum qualification intermediate in science. The selected candidates will be expected to join on the 22nd January 1945 and will work from 10 a.m. to 5 p.m. (with half hour's break for lunch) on week days and from 10 a.m. to 1-30 p.m. on Saturdays. The course will normally last for a period of six months and a fee of Rs. 50 only, which is not refundable, will be charged for the full course.

Candidates should submit written applications to the Director, Technological Laboratory, Matunga, Bombay, so as to reach him not later than 9th December 1944.

All-India Bobbin Manufacturers' Association, Bulsar.—At the request of many bobbin manufacturers in India Messrs. S. M. Pandit & Co., proprietors, Hind Bobbin Works, Bulsar, have organized an All-India Bobbin Manufacturers' Association and it was declared open by Mr. Nalin Bhatt, M.A., recently.

The objects of the Association are to protect and promote the bobbins, shuttles, and other textile wooden industries in this country, to promote and defend the trade of its members against competition, to arbitrate on the matters of disputes, to get the enactment of legislation beneficial to the trade and secure protective tariffs and facilities for transportation, to organize research on plants and machineries for standard production, and to carry out research on all raw materials used in this industry, and survey other natural resources for the development of the business and collect statistics for circulation among members and to establish a technological institute of bobbins and shuttles in India. The organizers appear to be making arrangements to establish the head office of the Association in Bombay.

Workers' Enforced Idleness: Need for Compensation.—The need for taking immediate steps by the Government of Bombay to make provision for the payment of adequate compensation to workers for the period of enforced idleness by introducing a scheme, in consultation with the Bombay Provincial Trade Union Congress, was stressed in a resolution adopted at a special conference convened by the B. P. T. U. C. at the Servants of India Society, Bombay.

The conference viewed with grave concern the involuntary unemployment that was occasionally forced on sections of industrial workers in some parts of the province, such as Khandesh and Gujerat, on account of stoppage of factories or industrial concerns for want of coal or raw materials or for other reasons. Such stoppage of work caused great hardship to workers, especially at a time when the cost of living had gone up enormously.

By another resolution the conference expressed the view that the proposals embodying principles for granting compensation for involuntary unemployment, which the Government of India recommended to the Provincial Government, were defective and fell short of reasonable expectations.

Foreign

Indian Textiles for China.—The Chinese members of the U.N.R.R.A. Council at a Press Conference said: "Among the items for relief which China is expected to get are some quantities of textiles from India, rice from Burma, Indo-China and Thailand." Asked if it might be foreseen that China would some day be sending food to India, he said he did not anticipate any such thing.

Australian Wool Fabric Printing Industry: An Encouraging Development.—A bright future for the Australian wool fabric printing industry is predicted by the Australian Wool Board. Printing consists of drawings, paintings of various subjects and coloured designs, developed from pictures, on a wide range of cotton and woollen fabrics for clothing, curtains and upholstery. It is said that a vast improvement has been made in the standard attained by this branch of Australian industry which is very encouraging to wool interests.

Universal Rise in Prices: Living Costs.—A world-wide increase in wholesale prices and the cost of living has taken place since the war began, as will be seen from the following League of Nations indexes for certain selected countries, showing figures at the end of 1943 or in the early months of 1944 (January-June 1939=100):—

Country	Wholesale prices	Cost of living
Iran	508	772
India	301	236
Egypt	280	255
Finland (Nov.)	256	200
Portugal (Nov.)	228	161*
Peru	209	152
Switzerland	209	151
Argentina	199	110
Denmark	197	156
Spain	191	170
Norway	180	152
Sweden	179	142
Mexico	172	176*
United Kingdom	169	130
Union of South Africa (Nov.)	154	125
Japan	147	143
Canada	140	118
United States	136	125
Australia	138	122†
Germany	109	111

* Excluding rent.

† Average September–December 1943.

Reverse Lend-Lease in India.—The volume of reverse Lend-Lease aid provided to United States forces in India has gone up by leaps and bounds. In January and February of this year alone American troops received over $35,000,000 worth of supplies. This was as much in two months as we had received in the entire year of 1942 and half as much as we had received in the entire year of 1943.

Reverse Lend-Lease aid furnished to the United States in India up to 1st March 1944, totalled almost $150,000,000. This came to us without payment on our part and saved many thousands of tons of shipping space. Petroleum products, including aviation gasoline from the British refinery at Abadan for the United States Air Forces in India, make up a large part of the total.

Other supplies received in the two months of January and February 1944, alone, included:—6,800,000 pounds of vegetables, 170,000 pairs of socks, 300,000 yards of cloth, 175,000 pairs of trousers, 700,000 gallons of Diesel oil, 200,000 sets of underwear, 4,000,000 pounds of meat and fish, 2,000,000 pounds of fruit, 1,000,000 pounds of beverages, 500,000 pounds of bread and 700,000 dozens of eggs.—*Foreign Commerce Weekly.*

Insect Eggs Flown to United States to Safeguard Vital Cotton Crops.—Cotton, from which comes the cloth to clothe Allied invasion troops in Europe and around the world (as well as stylish women) is going to be saved from the ravages of the dreaded cotton leaf worm—that is, if two types of warlike parasites, now busy setting up their own beachheads on southern cotton plantations, have their way. Recently a shipment of countless insect eggs from which the "good" parasites later were to hatch were despatched from Tucuman, Argentina, under Government priorities by fast airplane destined for infested areas in the Southern United States.

It is expected that promptly on hatching the mites will begin their deadly work against their avowed enemy, the *Alabama Argillacese*, scourge of cotton planters.

Earlier this year Harry Parker, an entomologist of the U. S. Department of Agriculture and the South American Parasite Laboratory, arrived at Tucuman in northern Argentina by plane to collect specimens of the two types of parasites that Ing. Guillermo Kreibohn de la Vega of Tucuman had discovered were lifelong enemies of *Alabama Argillacese.*—*Foreign Commerce Weekly.*

Fifty Years Ago

(From the *Indian Textile Journal*, November 1894)

An Early Appreciation

"The *Indian Textile Journal* will compare favourably in point of printing and general get-up with the best English and American publications of its class, while the support it has received from subscribers in this country and other manufacturing countries in the East shows that, as regards quality and originality of reading matter, too, it has taken a place in the front rank of technical periodicals. The display of advertisements gives the *Journal* a healthy look and the work is beyond doubt useful as an advertising medium for mill machinery . . ." —*The Bombay Gazette*, 31st October 1894.

The Indian Textile Journal

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Founded by SORABJI M. RUTNAGUR

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EDITORIAL

Re-equipping Indian Mills

WRITING the other day on the inadequacy of the present depreciation allowances for the task of post-war renewals and replacements of textile machinery, we suggested that about 50 per cent. of the entire spinning and weaving plant in India would call for replacement in the first 5-10 years after the war. There are 10 million spindles and 200,000 looms in the Indian cotton textile industry, the total yarn production being absorbed in the manufacture of 6,500 million yards (including 2,000 million yards on the handloom). It is believed that in order to maintain the present volume of cloth production, about 3.3 million spindles and 50,000 looms, with dyeing, bleaching, printing and finishing machinery in proportion, will have to be replaced in the first five years after the war. The present volume of production allows, however, a reduced *per capita* consumption of only about 12 yards and, if this *per capita* consumption is to be raised to at least 18 yards, India would require about 7,200 million yards, in addition to about 800 million yards for export. But, as the present yarn production of 10 million spindles suffices to produce only about 6,500 million yards of cloth about 2.4 million additional spindles and 68,000 additional looms might become necessary to produce the difference of 1,500 million yards between the present production and our ultimate objective.

According to an authoritative analysis made last year, there are in India about 4,500 blow-room machines, 24,000 revolving flat carding engines, 20,000 draw and speed frames and 22,000 ring spindles. Of the blow-room machinery 11.5 per cent. was installed before 1890, 11.1 per cent. between 1906 and 1910, 18.6 per cent. between 1921 and 1925 and 11.4 per cent. between 1936 and 1940. Thirty-five-and-a-half per cent. of the draw and speed-frames was installed before 1910 and 21.8 per cent. between 1921 and 1925 while ring frames showed a similar trend.

What, it might be asked, is the position regarding the replacement programme of Indian cotton mills? Cotton textiles occupy a pre-eminent place among Indian industries, and the Department of Industries and Civil Supplies, Government of India, has always attached great importance to their rehabilitation after the war. Preliminary discussions were held early in the year when it was decided to draw up a business-like statement indicating the general requirements of the industry. Such a statement was prepared by the Millowners' Association, Bombay, as the result of a questionnaire issued to its member-mills and it is believed to have reached the Government of India some months ago. At the same time, Indian mills have been informed that they had full liberty to arrange for the satisfaction of their requirements in any manner they chose and that they could place their orders wherever they chose, whether individually, or through the Textile Control Board, or through the millowners' associations. The Chief Controller of Imports will examine applications for machinery and arrange for its importation, mostly from the United Kingdom and countries of the sterling bloc. Although, therefore, the Government of India have no idea of canalising the orders, it is laid down that the orders should first be registered with Government and be automatically confirmed if not objected to by the latter within three months. The importer will have to submit a report to Government as soon as an order is confirmed and, if no report is received within six months, the order will stand cancelled automatically. The Government of India propose, further, to set up buying organizations in England and America to help the industrialist to secure the goods he wants.

While this is all to the good, Indian millowners are eager to know what arrangements, if any, have already been arrived at with England and America regarding priorities and where India stands *vis-a-vis* other textile machinery importing countries. Have the Government of India ascertained the volume and types of machinery that England and America could spare in, say, the first five years after the war ? It has so far been the practice to place orders for plant and equipment with manufacturers' representatives stationed in India, and in several cases even advance deposits have been paid in order to secure priority ratings. If the Government of India do not desire to disturb existing trade channels, will these priorities be honoured and will arrangements be made for the refund of the deposits? If so, the purchasing organizations which the Government propose to open in England and America, or, for that matter, even the joint organization suggested by Mr. T. Maloney* should be having little to do. Especially is this so when we bear in mind the strong individuality of Indian cotton mills and their reluctance to act as a team in affairs of this kind.

The bulk of India's machinery needs has for a variety of reasons been long met by England, and developments in the English machinery market should, therefore, be of more than passing interest ; we refer to the recent publication of the report of the Platt Mission to America and the current controversy in a section of the Press in England which focussed popular attention on the alleged backwardness of English textile machinery as contrasted with corresponding American makes. Everybody realizes, however, that the report of the Platt Mission to U.S.A. deals only with comparative production per man-hour without taking into account differing costs of production and other changing circumstances. According to authoritative American opinion, what Lancashire may appear to lack in machinery it has more than made up by the specially fine quality of its textiles ; as a matter of fact, in 1937 America itself took £750,000 worth of Lancashire textiles despite her high tariff wall. All the same, it is being said that American textile machinery is better than Lancashire machinery. In the course of the controversy on this subject, Mr. A. W. Rippon, of Textile Machinery Makers, Ltd., refutes the popular allegation and points out that new processes like single process lap making†, large package spinning, individual motor driving and high drafting have been supplied all over the world by Lancashire machinists for several years.

However that may be, there is bound to be a great shortage of textile machinery in the immediate post-war period even in countries manufacturing textile machinery on a large scale. In countries, on the other hand, which have been importing their textile machinery and accessories the position will naturally be much worse.

Manufacturing capacity being practically concentrated in America and England, the textile industries of those countries are likely to be given first preference. There is, besides, a section of opinion that regards exports of new textile machinery as being tantamount to subsidizing foreign competition in the finished product with the domestic producer. But the British Government have more than once given expression to their realization of the importance, in England's own interests, of the export trade in textile machinery. All the same the full satisfaction of India's requirements may be rather difficult, and some degree of international co-operation and co-ordination between machinery producing and exporting countries may be necessary. In the meanwhile present indications would seem to show that the situation in the immediate future will be met by the supply of new output for essential domestic and export demands and of second-hand and re-conditioned machinery where it is adequate for the purpose, and by establishing the machinery manufacturing industry in countries where the demand promises to be sustained and broad-based. It was reported the other day that certain Indian cotton mill interests were negotiating for the shipment of 20,000 old ring spindles from Lancashire to India and that similar transactions are expected to follow. Unilateral attempts, however, to liquidate India's sterling balances by the supply of re-conditioned machinery may be more or less resented in this country. In 1943 India imported about a third of the volume of textile machinery from England as it did in 1938, but paid about as much for this reduced volume as it did in the latter year; in other words, prices have gone up by 300 per cent. In these circumstances it becomes the special responsibility of the Government of India to arrange for the fixing of equitable prices for the machinery, new or re-conditioned, that India may require from England, and to provide adequate dollar exchange for purchases from America also.

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* Please see page 193. † Please see page 185.

British and American Cotton Mill Industries

Comparative Study Yields Interesting Results

American Machinery on Top?: British Textiles of Superior Quality

The Report of the British Cotton Textile Mission to the United States of America has been an eye-opener to everybody. It is divided into the following four parts: Part I—A comparison of production per man-hour in the U.S.A. and U.K. in spinning, weaving and preparation. II—A general review of industrial organization, machinery features, processing practices and working conditions in U.S.A. and British cotton mills. III—Review of management and labour. IV—Recommendations for the increase of labour productivity in Britain.*

After indicating the enormous leeway that has to be made by Lancashire in order to equal America's production per man-hour the report proceeds to examine the reasons for the higher American production per man-hour. It believes that man for man the British worker can be as efficient and productive as his American opposite number, and that the unsatisfactory production figures of Lancashire are due solely to mechanical handicaps, which the industry has since been planning to overcome.

"IN the course of discussions in Washington about the requirements of the United Nations for cotton goods, it has become plain that it will be difficult to maintain supplies at a level which will enable essential needs to be met. It is impossible to allot more labour and capacity to cotton, but it has been suggested that in spite of this it may be possible by suitable adjustments of methods to increase production here without further call on labour, and that a study of the methods used in the United States would be helpful in enabling us to do so.

" It is proposed, therefore, that a small mission led by the Cotton Controller should go to the United States to investigate and report on the methods used in the cotton industry there, and to advise on any changes in method that could be usefully made here."

These were the terms of a letter received by each member of the British Cotton Textile Mission to the United States of America, who unhesitatingly accepted the responsibility, from the Minister of Production, the Right Honourable Oliver Lyttelton. Throughout the whole of the visit these terms of reference were rigidly adhered to. It was to be purely a question of production per man-hour, and thus, costs of production not being a subject for the mission, the questions of comparative wage rates were not investigated. As every member of the mission, however, has spent the whole of his working life in the Lancashire cotton industry, it is obvious that the information gained in respect of the volume of production would, with the information gained in general discussions on operatives' earnings, give some rough and ready views on the comparative costing results. From that standpoint, therefore, the members of the mission did formulate their own views on the relative positions of the two industries.

The following were invited by the Minister of Production to make up the Investigating Mission:—

Sir Frank Platt: Cotton Controller, Ministry of Supply, formerly Managing Director of the Lancashire Cotton Corporation Limited.

Mr. Eric Cartwright: Director of Cloth Planning, Ministry of Supply, Cotton Control. Manager of Messrs. Fothergill and Harvey Limited, Spinners and Manufacturers.

Mr. Arthur Hollas, J.P.: Chairman of the Bolton Manufacturers' Association, and Director of several cotton spinning and manufacturing concerns.

Mr. Andrew Naesmith, O.B.E., J.P.: General Secretary of the Amalgamated Weavers' Association and of the Northern Counties Textile Trades Federation.

Mr. Alfred Roberts, J.P.: General Secretary, Amalgamated Association of Card, Blowing and Ring Room Operatives.

Mr. Horace Spibey, M.Sc. Tech.: Lecturer, Manchester College of Technology.

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Mr. John Walsh, B.Com.: Managing Director, Goyt Spinning Company Limited. President of the Manchester Cotton Association Limited.

The objects of the report which the mission has since submitted to Government are:—

(1) To ascertain and compare the productivity of labour employed in the cotton spinning and weaving mills of U.S.A. with that of labour employed in similar British mills,

(2) To account for any differences between the two,

(3) To compare production methods of typical American and British spinning and weaving mills producing similar type yarns and cloths, and

(4) To make recommendations for the increase of labour productivity in British cotton spinning and weaving mills.

Conclusions

(*a*) With normal staffing British p.m.h. (production per man-hour calculated on the basis of total output and total labour force) is less than the American by approximately 18 to 49 per cent. in spinning, by 80 to 85 per cent. in winding, by 79 to 89 per cent. in beaming, and by 56 to 67 per cent. in weaving.

With present conditions of staffing and fully running plant it is estimated that the British p.m.h. is less than the American by approximately 3 to 48 per cent. in spinning. The percentages for winding, beaming, and weaving are estimated to show no significant change from those given for normal staffing.

(*b*) For a given output considerably greater labour forces are required in the British mills.

With normal staffing the British labour requirements exceed the American by approximately 22 to 98 per cent. in spinning, by 387 to 571 per cent. in winding, by 366 to 786 per cent. in beaming, and by 129 to 203 per cent. in weaving.

With present conditions of staffing and fully running plant it is estimated that the British labour requirements exceed the American by approximately 12 to 63 per cent. in coarse and medium count spinning, whilst in fine spinning they are less than the American by approximately 5 per cent. The percentages for winding, beaming, and weaving are estimated to show no significant change from those given for normal staffing.

(*c*) The main reasons for the higher American p.m.h. are:—The use of high-draft, high speed, and automatic machinery wherever possible; the use of up-to-date plant (large sums of money being expended for this purpose); the application of scientific methods to the utilization of labour, which permits a relatively large number of units or machines to be supervised by a machine operative; the policy of concentrating on high operative efficiency (in terms of output), in many cases at the expense of machine efficiency; and the lower age of the operatives.

(*d*) Integration of the spinning, weaving and finishing processes has progressed to a much greater extent in America than in Britain, the processes operating on standardised and bulk productions for use, mainly in the home market. This system of bulk production makes possible the use of high speed and automatic machinery (particularly in preparation and weaving) which works on a three-shift basis, each of 48 hours per week.

The British mills, on the other hand, work one shift of 48 hours per week, are organized horizontally and, catering for both home and foreign markets, produce a wide range of products to meet the large variety of cloth types prevalent under the British commercial system. The sales made are both varied and small, and do not permit the economical use of highly productive automatic machinery.

(*e*) American processing practice, based on the continuous production of standard counts of yarn and cloth types, permits standardization to be applied to plant, processing methods, and labour, and is conducive to high standards of efficiency, organization and output.

In Britain, frequent changes in yarn counts and cloth particulars disturb the balance of plant and labour requirements and in many cases prevent the establishment of the optimum conditions for high production efficiency.

In quality the American standard of processing, generally, is slightly lower than the British, mainly due to a concentration on matters of engineering and organization, to the bulk production policy, to the reduction of processes to a minimum, and to the large number of units or machines supervised by an operative. The potentialities of staple and twist are, however, more fully appreciated in the American spinning and weaving industry, particularly with regard to their effects on labour force requirements.

Particular features of American practice, which do not apply generally in British mills, are the use of large packages such as cans, bobbins, beams, etc., the large-scale use of high drafting in card and spinning rooms, and the use of control devices in slasher sizing.

(*f*) American management has greater scope than British management in its utilization of labour because of the comparative absence of long standing practices and conventions and because of the acceptance by labour of scientific methods to matters of Work-assignment. The duties of an operative and the number of units or machines supervised are based on a work-load assessment which allows an operative a certain percentage of free or "idle" time. This time allowance will vary with the type of work on which the operative is engaged and may range from 10 to 20 per cent. There was no evidence of overloading of the operatives in American mills in spite of the greater number of machines supervised by them as compared with corresponding British operatives. On the basis of these work-load assessments wage rates are established.

(*g*) American mill managers, generally, are young and analytical and progressive in their outlook.

Recommendations

In making recommendations for the improvement in p.m.h. in Britain, it is necessary that any immediate or short-term re-equipment plans should be made with due regard to long-term plans. These short and long-term plans should be correlated and permit, as far as possible, a smooth economic integration, and should be prepared with the following basic objects:—

(1) To permit a higher degree of standardization and specialization, thus giving uninterrupted bulk production.

(2) To improve the standard of technical equipment in mills.

(3) To improve the working conditions in cotton mills.

(4) To secure a greater degree of co-operation between spinners and weavers, thereby raising the level of production efficiency.

(5) To provide a more scientific training for management.

(6) By the application of scientific methods to spinning and weaving practices and to the utilization of labour, and by the use of the most modern plant, to provide conditions which permit greater labour productivity and economy in production costs, and at the same time permit a higher level of wages for the operatives employed.

The short-term measures which may be adopted to comply with the immediate requirements of such a programme are limited but the following recommendations may be made:—

(1) The greater use of high drafting in both ring and mule spinning.

(2) The greater use of high drafting in card rooms.

(3) The use of larger cans in card rooms.

(4) Closer working arrangements between spinners and manufacturers.

(5) The use of slasher control systems and higher speed slashing.

(6) The greater use of automatic drawing and knotting machines.

(7) Where practicable, increasing still further the number of looms per weaver, necessitating a greater application of larger yarn packages, warp stop motions, automatic let-off motions, etc.

(8) A greater sub-division of weavers' duties.

(9) Wider loom spacing.

(10) The use of high speed shearing and planting machines.

(11) Greater economy in the utilization of labour by permitting operatives to supervise more units or machines, where practicable.

(12) Improvements in internal mill conditions by the greater provision of runways, improvements in lighting, etc.

The above recommendations constitute the short-term plans. To lead to the fulfilment of the long-term plans certain recommendations are made for changes in the methods of distribution, for the modernization of the industry on the basis of man-hour production, and for conducting defined investigations within the industry.

American Mission Visits England

Subsequent to the visit of the Platt delegation to America, the Government of the U.S.A. sent a cotton textile mission to England with the object of assisting the War Production Boards of the two countries in co-ordinating the work of meeting their textile needs. The mission consisted of the following:—

Messrs. G. H. Lanier, Jun., Director of the Cotton and Synthetic Textiles

Division, United States War Production Board, who before the war was a dyer; T. M. Bancroft, Assistant Director of the Textile Clothing and Leather Bureau, War Production Board, and Vice-President of the Turner-Halsey Company, New York, distributors; W. S. Montgomery, President of Spartan Mills, Spartanburg, South Carolina, and Vice-President of the American Cotton Manufacturers' Association; J. H. Bolton, Vice-President of the Whitin Machine Works, makers of textile spinning machinery; and W. F. Lowell, Vice-President of the Saco-Lowell Shops, who also make textile spinning machinery. They had a busy time visiting all branches of the Lancashire cotton textile industry and expressed themselves well pleased with all that they saw.

In an interview Mr. Bancroft said:—

" While we have been here we have seen every section of your cotton industry, from the handling of the raw cotton to the merchandising of the manufactured and finished goods. We have found points of similarity to our own and others of dis-similarity, and the way everyone has answered our questions, without any reservation, has warmed my heart. As you know, your mission under Sir Frank Platt recently visited our country and we hope that this interchange of ideas will be kept up. We shall present our report to our War Production Board, just as Sir Frank has done to your Board.

"In this country your industry is organized quite differently from ours. Your spinning, weaving, finishing, and merchanting are done separately. We do the whole thing in one. On the average our units are smaller than yours. We have hardly any with more than 100,000 spindles, and though we have combines controlling larger figures some of your combines are bigger than ours. But for the type of consumer for which we cater, for the most part in the mass at home, our type of organization is the better. On the other hand, if we had to cater for a 75 per cent. export our organization would not satisfy the markets; our vertical organization would have to go. Distance has a great deal to do with it also. There are 1,500 miles between our northern and our southern mills."

Mr. Montgomery expressed his agreement with Mr. Bancroft's views on the need for different organizations.

" One thing we have noticed," "he added," is the difference in the quality of the cloth produced. The quality of your cloth is very much finer than ours, and I think you have a real market in America for your finer types. We have practically no mule spinning in America. I know of only two mills with mules. I should not agree with anyone who said that the mule was out of date for Lancashire. Here you give your goods more individual treatment. There is much more specialization. You are more concerned with quality than with quantity. I have been impressed also with the care given to your machinery. It is quite exceptional. I went through one mill which has been closed down under concentration for three years. It looked just like having been shut down yesterday. One overlooker said he could restart with 24 hours' notice. I was also told that some of the employees out of loyalty to their mills are keeping the machinery up to the mark in their own time, without pay."

American Textile Interests Criticise Export of Textile Machinery ?

WHILE approving with reservations the war surplus disposal plan as proposed by Foreign Economical Administrator Mr. Leo T. Crowley, American textile exporters indicate that they would oppose vigorously any programme to ship large quantities of textile machinery to foreign producers.

They believe that considerable harm to American traders would result if war surpluses are sent abroad at prices cheaper than manufacturing costs plus a reasonable profit in that it would be difficult to make sales at a later date.

If surplus goods are sold direct to foreign Governments through buying commissions, rather than through accredited exporters, re-establishment of trade relations after the war will be retarded by many months, if not years, and will deprive foreign importers as well as American exporters of profits for which they have waited a long time, it is stated. Any large quantity of surplus goods would reduce proportionately the quantity of new manufacture sent by American manufacturers to export markets, it is stated, and fair play calls for the opportunity of traders to share in the business.

Shipment of textile machinery abroad in line with rumoured Lend-Lease plans before American needs are filled would be doubly harmful, according to the exporters. Not only will American manufacturers be unable to replace worn-out and outmoded equipment which prevents them from supplying domestic users of textiles at the most economical prices, they say, but such a move will give foreign producers an almost immediate opportunity to capture world markets at a time when U.S. will need this business to keep her own post-war economy steady.—*Textile Mercury and Argus.*

Cloth Distribution in Wartime

Post-war Possibilities of Current Experiments

By P. C. JAIN, M.A., M.Sc. (Econ.) London, *University of Allahabad*

(*Specially Contributed*)

THE war has familiarized the Indian cotton textile industry with new methods of distributing cloth and these are likely to have interesting repercussions in the post-war period. Under the new scheme introduced by the Textile Control Board, cloth is supplied direct from mills to the retailers thus eliminating a whole series of intermediaries. This scheme is yet in its infancy but there is no doubt that it will soon be extended and, moreover, it is expected that a further refinement will be introduced when the market is divided into different regions and the retailers in any particular region are supplied only by some specified mills. This is bound to result in the creation of definite "areas of influence" for each mill. The Textile Control Board has sponsored this scheme with the only object of eliminating black markets and making price control effective. It is easy to control the behaviour of a few licensed retailers while it is almost impossible to keep under control a host of middlemen many of whom work underground. This scheme will help in eliminating black markets but this is a small affair as compared to the possibilities which it opens up of improvement in peace-time distribution of cloth.

Old Channels of Trade

The wholesale cloth dealer, like his prototypes in other trades, performs two very important functions. He buys cloth from the mills and finances its movement from the producer to the consumer and, secondly, he provides the retailer with an easily accessible source of supplies. The producer gets paid and washes his hands of the transaction and does not bother at what price and how soon the wholesaler is able to dispose it of. The wholesaler, of course, will not repeat his orders unless the consumer, through the retailer, shows his preference for a particular make of cloth. It is, therefore, only indirectly that the producer keeps himself in touch with changing tastes of the consumer. The wholesaler provides no information to the mill on this point. He follows the line of least resistance and buys cloth, foreign or Indian, which sells quickly and leaves him a fair margin of profits. This often puts the Indian manufacturer at a disadvantage as compared to the Japanese or English producer. The Japanese producer has been able to supply cloth, quality for quality, at very cheap prices and this gives the wholesaler a better margin of profits as the low wholesale price permits him to sell quickly as well as to add to the price a higher percentage as his own share. In the case of British cloth, the quality considerations and the unfounded belief in most Indian consumers that British goods are always of high quality enable the wholesaler to effect a quick turnover of goods and charge a higher margin as his own profits. The consumer prefers to buy British cloth even if a higher price is charged because of his prejudices.

The Wholesale Dealer and His Future

This system, therefore, has some very awkward consequences for the Indian manufacturers. There is not only one wholesaler but a series of them and a piece of cloth passes through many hands before it reaches the retailer and through him the consumer. Each wholesaler adds his margin to the price and in this way the retail price of cloth is unduly increased. We have already noticed that the foreign producer is not much handicapped by this enhancement of prices but it is different with the Indian cloth which consequently suffers in its competitive power. Moreover, because of his being separated from the consumer the producer of cloth feels helpless and, apart from occasional advertisement in the Press, can do nothing to popularize his goods and increase their sales. The manufacturer of cloth might quote lower prices for his lines but that does not necessarily reduce prices for the consumer because the series of wholesalers between him and the consumer is likely to swallow this reduction. What is worse, the manufacturer has no means of studying consumers' tastes and often he either copies foreign designs or introduces a large number of new designs originating from the mind of the artist and without much sense of reality. This leads either to a lack of originality or an excessive multiplication of types and designs leading to the manufacture of cloth on a small scale in the vain hope of capturing the market. The net result, however, is a further complication of the situation. If the wholesaler is eliminated the price to be paid by the consumer will be reduced and it would give to the producer an opportunity of coming into closer touch with his "market." The elimination of the wholesaler is likely to cause some inconvenience and confusion in the beginning so far as the producer is concerned. But an adjustment to the new situation will quickly be achieved and the botheration is worth taking in the interest of pushing sales and developing the market on scientific lines. The problem of financing the movement of goods will not cause as much trouble as some would make us believe. Even now the producer has often to grant the wholesaler liberal credit facilities and, apart from this, the necessary finances can easily be arranged either through banks or by increasing the working capital.

Need for Centralized Organization

The elimination of the wholesaler alone is not enough. The process of controlling the sales will have to be further extended and the best policy for the cotton textile mills is, by mutual agreement, to divide the internal market into definite regions allotted to specified mills so that there might be no cut-throat competition, at least among the Indian manufacturers. In this division of markets care will have to be taken of the transport costs and the types of cloth and yarn produced by the different mills. It would be a sound policy to allot the nearest market, or if there are many producers to divide it between them, to a particular mill if it manufactures the lines in demand in that area. There will, of course, be some areas producing more cloth than they can consume and others which have a short supply. But it should be perfectly possible to allot deficit areas to distant mills which are unable to obtain a market in their own locality. It shall be equally possible to adjust the supply of certain special types of cloth and yarn produced by only some mills. These specialities might be rationed, on some definite basis, between the different regions. Such a scheme will prevent unhealthy competition among Indian manufacturers and enable them to come together for joint action. And on the basis of this joint effort it should be possible to stem the tide of foreign competition at least so far as the Indian market is concerned. It will also prevent unnecessary movement of cloth, thus saving transport and other handling costs. Each producer will have a clearer idea of the possible market demand on which he might rely. This would prevent over-production and the consequent evils. But in order to make this scheme successful a centralized organization will have to come into existence. It would also help member mills in various other ways such as research, centralized purchase of raw materials, chemicals and dyestuffs, and joint representation.

The Retailer and His Future

A further extension of this scheme will involve a control on the retailer as well. At present the retailer sells imported cloth alongside the Indian cloth and he is indifferent as to which sells more. He is interested only in his profits. It often happens that even if the consumer is prepared to buy Indian cloth the advice of the retailer leads him to buy the foreign stuff. The name of Lancashire still works magic on some consumers who are prepared to buy British-made cloth even if, quality for quality, the Indian cloth has the same price or is cheaper. This pitiable state of things will end if, like the Delhi Cloth Mills, the other manufacturers also open retail shops, to begin with, at least in the bigger towns. Alternatively they might exercise a definite control on the retailer, as is done by the manufacturers of certain other commodities in our country. The Indian textile manufacturers have so far been helpless because they have not exercised such extensive supervision and control. They could somehow pull on in the past but times have now changed and this extension of activities is necessary for bare existence. The shops opened by the Delhi Cloth Mills have given great satisfaction to the consumers and have pushed the sale of D.C.M. products. The experiment has been successful and deserves a wider application.

The Export Market

The distribution of cloth in the foreign markets is as yet thoroughly unorganized. A portion of the exports is handled by the manufacturers themselves while a major part of them passes through the hands of Indian exporters. But even where the manufacturers undertake exports they do nothing more than deliver the cloth to the merchant in the importing country. No effort is made by them to study consumers' tastes in foreign markets. No care at all is taken of the quality of goods supplied or the packing and markings of bales of cloth intended for export. The manufacturer in India does not know and does not care to know the price at which Indian cloth is sold in foreign markets. His job is done if the importing merchants or the wholesalers in foreign countries place orders for his goods and pay him. The Indian producer has not yet fully realized the possibilities of the export market though the war has given him some idea of what it can yield. In the last few years the world's textile manufacturing capacity has considerably expanded and, in spite of some destruction of capacity in war-zones, with the cessation of hostilities we should expect cut-throat competition to return more quickly than most of the industrialists seem to believe. And in order to take time by the forelock the Indian manufacturers have to prepare themselves to face the ordeal.

The Cloth and Yarn (Export Control) Order, 1944, makes some effort at improving the situation. It fixes price margins, over and above the ex-mill rates, both for the manufacturer-exporters and the exporting merchants with the object of controlling prices. It is desired to make Indian cloth available to the foreign consumers at not more than 30 per cent. over the ex-mill rates. This would only solve the war-time problem but it is equally necessary to ensure that the foreign consumers continue to get Indian cloth at competitive prices even in peace-time. This should claim immediate attention on the part of Indian manufacturers. The Order lays down certain minimum standards about packing and markings on packets intended for export. This, if properly enforced, will remove a longstanding complaint of importers in foreign countries. The quality of cloth supplied to the foreign market will also be supervised. A part of the money raised from the 3 per cent. export duty on cloth will be spent on research and advertisements aimed at popularizing Indian cloth. These are fine intentions but in order to make them effective a far larger amount of money will have to be spent than the export duty can yield and the export control organization will have to be set up on a permanent basis. It is a pity that the Textile Control Board refuses to look beyond the war period. At present it may be urgent to restrict the exports of cloth to 600 million yards per annum and to control the prices of exported cloth but, from a wider point of view, the most urgent need of our expanded cotton textile industry is to hold as much of our foreign markets as we possibly can even when peace returns. It is only bold action on the part of the Indian cotton textile manufacturers which can save the situation.

Geelong Textile College, Australia

THE Textile College to be built in Geelong will serve Australia and is being established primarily for the student who wishes to do the advanced course, i.e., training for managerial staff and technological posts. It will deal with wool, cotton, silk, flax, and synthetic fibres, with the emphasis on wool. The departments of the Wool Section will be wool classing and sorting; scouring and carbonizing; woollen yarn production; worsted yarn production; weaving yarn production; dyeing and finishing; and research and testing. The first two and the last departments exist at present and are in operation.

Advanced courses to the standard of the Leeds University and Bradford Technical College Diplomas will be given, with special courses designed to meet the special needs of the industry.

The courses and syllabus are, of course, under discussion, but finality has not been reached. The smaller number of mills in Australia, the distances involved, etc. will modify the courses in many respects, compared with British textile education.

Cotton Standards in the Madras Presidency *

By J. S. PONNIAH, M.A., *American College, Madura*

(*Specially Contributed*)

ONE of the most difficult problems in the organization of efficient marketing of raw cotton in India is the establishment of suitable grades and standards with a view to facilitating quick purchases and sales and accurate quotations of prices.

The cotton standards established by the East India Cotton Association are followed only in the two cotton exchanges of Bombay and Karachi, and it is doubtful whether they would be adopted as " the universal cotton standards " of India (as indicated by their name) in all the spot cotton markets scattered all over the country.

The Agmark Cotton Grading Scheme of the Government of India under the Agricultural Produce (Grading and Marking) Act of 1937, intended to enable the growers of improved varieties of cotton to obtain adequate premium for purity and quality, unfortunately enough, has had only a limited success in the case of cottons like 1027 A.L.F. and had even to be given up in the case of Cambodia cotton at Tiruppur in the Madras Presidency.

Though the prospects for the general adoption of the " universal cotton standards " of the East India Cotton Association or the Agmark Cotton Grading Scheme of the Government of India are not bright, it is indeed refreshing to learn that the cotton trade in the Madras Presidency, particularly in the three southern districts of Madura, Ramnad and Tinnevelly, has actually evolved during the past quarter of a century and is also enforcing even to-day certain grade standards for the local cottons. It may be added that though these standards are of a purely local character and imperfect in several respects, they are capable of improvement and lend themselves to permanent adoption by the trade as a whole, provided the Government takes the necessary initiative and introduces suitable legislation. The following account is intended to give an idea of the evolution of these local cotton standards and the problems involved in their enforcement by the Government.

Cotton Standards in the Madura Area

The history of the evolution of cotton standards in the three southern districts of Madura, Ramnad and Tinnevelly (Madura Area, for short) may be traced as far back as about 1890 when European exporting firms, like Ralli Bros. and Volkart Bros., started their business of cotton buying in this area, and adopted a system of buying entirely on the basis of " grades " even from the very commencement of their business. In fact, some standard or other was absolutely essential as the firms were buying cotton on a forward contract basis. The grade adopted was what is known as f.a.q. (fair average quality). Such a simple grade standard was sufficient at that time because there was only one variety of cotton, namely, Tinnies, and its quality did not show appreciable variation from season to season. Hence it was sufficient for the firms to stipulate merely delivery by sellers, of cotton of fair average quality of the season as the tenderable cotton against their forward contracts.

Though the standard denoted by the phrase f.a.q. was vague, both buyers and sellers were generally agreed as to the exact quality denoted by it. A local witness described the working of this system in the following terms in the evidence placed by him before the Indian Cotton Enquiry Committee of 1919:—" When the season was normal and the market steady, the dealers delivered according to quality agreed upon; but when unseasonable rains reduced the crop or when sharp rise of prices occurred, there was a tendency to deliver cotton below grade."

It was pointed out by certain other witnesses who appeared before the same Committee that on account of severe competition amongst themselves, the exporting firms were reluctant to penalise deliveries below grade by lowering the prices or by paying premium for deliveries above grade but resorted to paying only a uniform price for good as well as inferior grades. The sellers being unorganized were also not able to enforce their claims for premium when they delivered cotton above grade. Further, there was no public tribunal to settle any dispute arising out of grade claims.

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* Summarized from the author's thesis, " Production and Marketing of Cotton in the Madras Presidency," which was recently approved by the University of Madras for the D.Litt. degree.

Partly on account of the difficulties explained above, and partly on account of the introduction of Karunganni and Cambodia which brought in new grade qualities, the European exporting firms were obliged to adopt a different set of standards for buying cotton in this area. Messrs. Ralli Bros., who were pioneers in this, are said to have set up in 1917 the two following standards which recognized nine grades for each of the three varieties of cotton, namely, Tinni, Karunganni and Cambodia. Each grade was designated by a number with a view to facilitating its easy identification by traders.

TABLE I

Cotton Standards of Messrs. Ralli Bros.

(A) TINNI AND KARUNGANNI

1. Good. 2. Strict Good. 3. Barely Good. 44. Fully Good Fair. 4. Strict Fully Good Fair. 55. Barely Fully Good Fair. 5. Good Fair to Fully Good Fair. 66. Good Fair. 6. Strict Good Fair.

(B) CAMBODIA

77. Fully Good Fair. 7. Barely Fully Good Fair. 88. Good Fair to Fully Good Fair. 8. Good Fair. 99. Barely Good Fair. 9. Good Fair to Fully Good Fair. 10. Barely Good Fair. 11. Fully Fair. 12. Strict Fully Fair.

Some time later, the other exporting firms followed suit and set up their own standards, each one however employing a different series of numbers as shown in Table II below. Of all these standards, those of Messrs. A. & F. Harvey have become popular and well recognized for two reasons. Firstly, a separate standard has been set up for each variety of cotton; one for Tinni, another for Karunganni and a third for Cambodia. Secondly, each standard is described by a number containing three digits in which the first digit denotes the variety, the second digit the grade and the third digit the staple. According to this scheme of grade classification, the three standards of the Harveys are:—

666 .. .. Tinni.
777 .. .. Cambodia.
888 .. .. Karunganni.

As the above-mentioned numbers in each of the three standards represent the highest grades, a lower number is employed to denote a lower grade. For example, if a particular lot of Cambodia is two grades off in colour and one grade off in staple, its grade number is 756. Similarly, if a sample of Karunganni is three grades off in colour and two in staple, its grade number is 856. This explanation holds good to all possible grade combinations that can be thought of.

The grade standards of the other exporting firms as well as those of some of the mills of the area are given below in a summary form as they do not exhibit any striking peculiarities. In fact, in the case of certain grades, merely arbitrary names and numbers are given. For example, a higher number is employed to denote a lower grade in the case of the standards set up by the Bombay Company and the Japan Cotton Trading Company, and names such as Karan and Felix in the standards of Volkart Bros., are merely conventional.

TABLE II

*Raw cotton standards of certain exporting firms and mills in the Madura Area**

Name of firm or mill.	Tinni.	Karunganni.	Cambodia.	Remarks.
The Bombay Company.	423-(1) 424-(2)	412-(1) 413-(2)	306-(1) 307-(2) 308-(3)	There are only two grades in Tinni and Karunganni.
Volkarts ..	70-(1) F.G.F. (2) †Tamil (3)	71-(1) Felix- (2) Karan- (3)†		There were only two standards and two grades in each standard until 1938.
Japan Cotton Trading Company.	162	364-(1) F.G.F. (2)	160-(1) 161-(2)	Are not in use since 1941.
MinakshiMills.	333	444	555	The standards are similar to those of the Harveys.

In the light of the above-mentioned experiences of the cotton traders of Madura area, we may say that definite grade standards can be employed for the three important varieties of Tinnies,

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* Numbers within brackets indicate the order of qualities.

† Introduced since 1938.

Karungannies and Cambodia, both in the Madura and Coimbatore Areas, provided that only one uniform standard is recognized in all the markets, that carefully-prepared type samples of different grades are maintained by the Market Committee and that all transactions in the market are enforced only on the basis of these recognized grades as is done at Adoni.

Standards for Cotton Grading at Adoni

The basis for cotton trading at Adoni (Bellary District, Madras Presidency) is the Middling Grade represented by the two symbols, MM and FF, which denote respectively Mungari and Farm cottons. Prices in the market are to be quoted only in terms of this basis grade as so many points "on" or "off" MM or FF—each point "on" or "off" being valued at annas eight. Since the introduction of this method of price-fixing, the Adoni Cotton Market Committee has prohibited buyers from claiming or taking uniform and fixed allowances in addition to the usual allowances which they took when *kapas* in the borahs did not come up to the standard of the samples shown. Moreover, commission agents in the market as well as the buyers who buy directly from the ryots have to maintain their records of purchases and sales entirely on the basis of MM and FF. The market report published by the Market Committee also gives the quotations of local prices on the same basis. The only improvement that is needed at Adoni is the preparation and maintenance of type-samples for the basis grade as well as the other grades.

Standards for Cotton Trading at Tiruppur

The predominant method of sales of lint and *kapas* at Tiruppur being on the basis of actual samples and open bargaining between buyers and sellers, there is very little transaction on the basis of grades excepting for a small volume of cotton sold mainly to the Harveys on the basis of forward contracts. Hence, in order to popularise the method of trading on the basis of grades, the Cotton Market Committee at Tiruppur classified cotton into five definite grades—"superfine," "fine," "fully good," "good," and "fair," prepared and made available to the traders in 1940 samples for three grades, viz., "fine," "fully good," and "good" in respect of Cambodia, and one sample of the middling grade "fully good" in the case of Karunganni. These standard samples, according to the report of the Market Committee, have been discontinued since 1941 as there was no demand for them from the traders.

The lack of demand for trading on the basis of standard samples and the discontinuance of Agmark Grading for Co.2 cotton in the Coimbatore District raises the important question whether cotton grading is essential, when buyers and sellers can meet each other (owing to the close proximity of the markets to centres of production on the one hand and to mills and offices of exporting firms on the other) personally and settle transactions by direct bargaining. Even in the United States of America, personal inspection is said to be taking the place of buying on the basis of grade standards, owing to the increasing use of the motor truck and the facility for buyers and sellers meeting each other.

Even so, the experiences of cotton trading in the Madura Area and at Adoni show clearly that trading on the basis of grade standards gives precision and accuracy to quotations of prices and enables the market authorities to control all transactions. In fact, our enquiries in the various market centres show that financing banks are considerably handicapped in providing credit facilities to their constituents for lack of such accurate and reliable information as to the exact grades of cottons pledged with them, and that they would welcome the establishment and enforcement of grade standards in local markets. It may be added further that the Regulated Cotton Markets of the Madras Presidency may maintain for themselves either from funds provided by themselves or from grants obtained from the Provincial Government a cotton technological laboratory situated preferably at Coimbatore as a part of the proposed Technological College there. Such an institution can carry on some of the routine tests on fibre length, etc., of local cottons which are now being carried on at the Technological Laboratory of the Indian Central Cotton Committee at Bombay and eventually help in the building up of suitable grade standards for cotton trading in these areas.

Markets for Indian Cotton Textiles in Australia and New Zealand

Report on Indo-Australian Trade in 1942-43

Certain statements appearing in the Australian Press regarding the alleged poor quality of cotton textiles imported from India have, on enquiry, proved exaggerated. Enquiries reveal that these statements do not represent the views of the Australian Government, who consider as very satisfactory the quality of textiles coming forward from India. It is understood that the Indian textiles export quota system, linked with the Australian import licensing system, is running very smoothly. In a press statement released by Senator the Honourable R. V. Keane, Minister for Trade and Customs, on 26th May, the following observations appear :—

"As regards complaints made concerning low grade Indian textiles Senator Keane stated that these importations arrived in Australia on behalf of private traders. They had been ordered, imported and paid for by traders who were obviously not familiar with the Indian market. In some cases he believed the purchases were made in the bazars and not from the Indian manufacturers. As far as his information went the quantity so imported was not very large having regard to our total requirements. As soon as the first of these importations arrived the Division of Import Procurement took action to impose an import control under which each importer had to obtain the consent of the Division to the importation and before giving such consent the Division must be satisfied as to both quality and price of the civilian textiles. These remedial measures have ensured that reasonably good and reasonably priced textiles come forward to Australia and enable us to utilise the Indian quota allocated to Australia to the best advantage."

THE following are extracts from the report of the Indian Trade Commissioner, Australia, for the year 1942-43:

Imports of cotton textiles from India into Australia are classified under four broad heads:—(1) Canvas and duck; (2) Grey unbleached ; (3) White bleached and (4) Printed, dyed or coloured. Imports from India under each of these heads recorded an improvement in 1942-43. The share of India in the imports of canvas and duck increased in value from 35.2 per cent. to 35.8 per cent. whereas imports from the United Kingdom, the principal supplier, declined from 57.7 per cent. to 52.5 per cent. as compared with the preceding year. The volume of imports from India under this head, however, declined from 48.9 per cent. to 46.7 per cent. whereas that from the United Kingdom improved from 45 per cent. to 45.8 per cent. showing a proportionately larger appreciation in the price of canvas and duck in the Indian market. This is borne out by a comparison of the average value per square yard which in the case of imports from the United Kingdom improved from 2*s.* 1*d.* to 2*s.* 3*d.* as against a much larger increase of 4*d.* from 1*s.* 2*d.* to 1*s.* 6*d.* in the case of Indian goods. Under grey unbleached the share of India in the total value increased from 41 per cent. to 78 per cent. and quantitatively from 56.8 per cent. to 80.4 per cent. This contrasts with a decline in imports from the United Kingdom of 10 per cent. from 23 per cent. to 13 per cent. in value and of 5.2 per cent. from 19.2 to 14 per cent. in quantity. Here again the average value of imports from the United Kingdom fell from 11½*d.* to 9*d.* per square yard whereas that of the Indian material rose from 7*d.* to 9.4*d.* per square yard. In the case of white bleached goods a similar improvement is recorded. In value the share of India increased from 30.3 per cent. to 58 per cent. and in quantity from 35 per cent. to 56.5 per cent. This was achieved principally at the expense of imports from the United Kingdom which receded in value from 63 per cent. to 37.4 per cent., and in quantity from 62.3 per cent. to 38 per cent. The average value per square yard increased for both countries—imports from the United Kingdom advancing from 10*d.* to 1*s.* and those from India from 8.6*d.* to 11*d.*

In the case of textiles classified under the head "Printed, dyed or coloured," total imports have shown a considerable decline but imports from India have been maintained at last year's level and her proportionate share of the trade thus shows a very substantial improvement—imports have gone up in value from 16 per cent. to 35.8 per cent. and in quantity from 17.9 per cent. to 38.2 per cent. The share of the United Kingdom has fallen from 81.7 per cent. to 61.8 per cent. in value and from 79.2 per cent. to 59 per cent. in quantity. Average values of imports from both countries show appreciation having gone up in the United Kingdom from 11.7*d.* to 1*s.* 2*d.* and in India from 10*d.* to 1*s.* 1*d.*

Imports from India into New Zealand in 1942 were nearly three times as compared with imports in 1941 and are likely to show further improvement in 1943.

In spite of the very substantial improvement which has been recorded in the imports of cotton textiles from India the position should not be allowed to produce a feeling of complacency. Australia and New Zealand have been forced through purely extraneous circumstances to rely on India for the supply of their essential needs of cotton textiles. When these circumstances no longer prevail Indian manufacturers will have to meet very severe competition in these markets and their hopes of survival will depend entirely on their ability to satisfy the requirements of these markets more effectively than their competitors. As regards the special requirements of Australia and New Zealand in regard to piecegoods, emphasis in this market apart from considerations of size is definitely on quality and finish. The presence of inferior goods known as "shoddy materials" is resented and creates a prejudice against the country of manufacture. Unfortunately a substantial proportion of imports from India has not been above criticism of this description. Grey sheeting has been generally of good quality but the appearance and finish has been very poor. In the case of white sheeting with some exceptions, even the quality has not been up to Manchester standard. Heavy sheetings, specially those woven from Egyptian cotton, even though they are expensive have been much in demand. Shirtings have been generally satisfactory but the width of Indian shirtings is unsuitable for the market. It is necessary to keep fully abreast of new designs in shirtings. Some of the drills have not been found suitable for machine stitching. Better finish and improved designs would be an important factor in the sale of towelling, table linen and flannelettes. In the case of prints the question of designs deserves special study. Greater attention must also be paid to packing. Some of the recent arrivals were found to be damaged due entirely to defective or inadequate packing.

It is almost certain that, unless manufacturers take steps, now, to make the necessary adjustments a great proportion of the imports of cotton textiles into Australia and New Zealand will be eliminated as soon as conditions return to normal. Steps are already being taken elsewhere to ensure sales overseas. The following extract from an article in one of the journals here would be found interesting in this connection :—

"Volume in linen and cotton production cannot now be produced in England, but quality can, and is being made. Manchester has recently shown a small, but deeply interesting, collection demonstrating how the manufacturers, working through the Colour, Design and Style Centre of the Cotton Board, have kept up the creative spirit, so that, as soon as the war is won, they can take up both volume and quality sales. Recently Finnigans, Manchester, staged a novel exhibition of very advanced textile designs. These have been created with the express purpose of satisfying an 'after-the-war' market, both at home and overseas—with a particular eye to the Americas. All are gay, colourful and practical, and for inspiration the designers have turned to subjects varying from an English garden in spring to the grim humour of the British nation at war. Propaganda has not been overlooked, and some quaint creations have sprung from it."

Research has also been directed in recent months to the production of new fabrics. Information in regard to two fabrics which are being developed by scientists in the U.S.A. was published here recently. It was claimed for one of these fabrics that "it will look and wear as well as silk or wool, and yet retain the durability and cheapness of manufacture for which cotton is noted." The new fabric is as different from cotton cloth as rayon, but unlike the latter the new cloth does not break down the cotton fibre by chemical means for the cellulose it contains, but uses the natural fibre intact. The new cotton fibre is believed to be based on some new form of synthetic resin application. The four characteristics of the new fabric are stated to be :—1. Resistance to creasing like wool. 2. Ability to fit or shape in the manner necessary for women's garments. 3. Ability to transpire bodily moisture. 4. Durability, meaning that the material can be laundered or dry-cleaned repeatedly.

The second fabric is known as Masslin and is ready for commercial use, but distribution through retail outlets has been postponed until after the war. The process by which this fabric is produced consists of converting cotton into cloth without spinning or weaving. It is expected to be used for cheap tablecloths, sheeting, etc.

Suggestions for Promotion of Goodwill

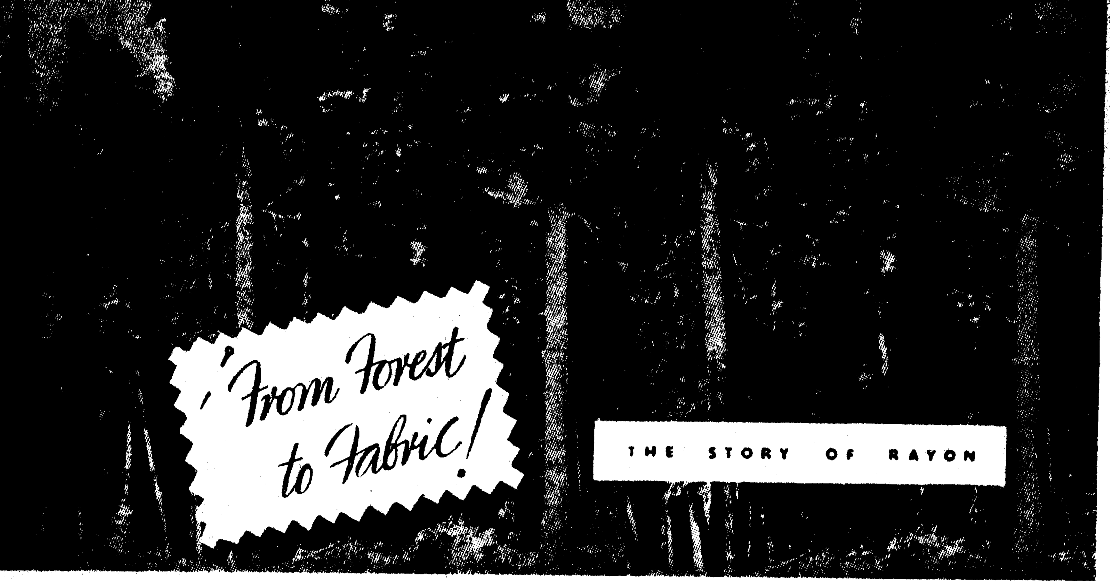
It is highly important to develop trade with Australia and New Zealand.

1. *India favourably placed in Australasian Markets.*—At present, owing to purely adventitious circumstances, the Indian exporter is very favourably placed in the Australasian markets. He has virtually no competition from rival sources of supply to overcome. On the other hand, the consumers have a large surplus of purchasing power in their hands due to greater employment and larger earnings. In these circumstances, the importer buys what he can get and wherever he can get it. The seller in India is in the fortunate position not only of being able to sell what he has, but also to dictate his own terms. As conditions begin to return to normal this very desirable state of affairs will no longer prevail. Manufacturers and suppliers from other countries will endeavour—and there are unmistakable indications that they are already looking ahead and preparing so to do—to enter or re-enter these markets, and as these offers increase in scope and variety the Australian importer and eventually the consumer will again begin to indulge in the luxury of discrimination in buying which he has had to forgo. This discrimination will be exercised in favour of the Indian exporter and manufacturer only if he has earned the goodwill of the importers on this side, and his goods from the point of view of variety, quality and price, do not compare unfavourably with those from other sources.

2. *Study of Special Requirements.*—In order to achieve this result it is essential, in the first place, that the special requirements of this market should be studied and necessary adjustments made wherever possible. In the case of cotton textiles, for example, the quality, colours, patterns, widths and finishing are of great importance. This is equally true of floor coverings. Somewhat similar considerations apply in the case of other commodities. The Trade Commissioner will readily assist manufacturers and exporters in studying the requirements of this market in specified lines.

3. *Packing.*—Another equally important factor is packing. Insufficient attention has been paid in India to this factor, and otherwise acceptable goods have been damaged in transit to Australia due to their being packed unsuitably or inadequately.

4. *Adoption of Improved Business Methods.*—I would again like to emphasize that Indian business methods leave considerable room for improvement. Samples sent are very often far from adequate. Prices are not quoted or, if quoted, the buyer is asked to make counter offers. Very naturally it is presumed, in these cases, that the seller is endeavouring to bargain with the buyer, and is not quoting a fair and reasonable price. Again, in the matter of business correspondence, many firms in India do not pay sufficient attention to details and are not prompt in sending replies. This creates an unfavourable impression.



'From Forest to Fabric!

THE STORY OF RAYON

AN early English scientist, Dr. Robert Hooke, forecast the foundation of the rayon industry in this quaintly phrased passage, written in the middle of the seventeenth century. " I have often thought that probably there might be a way to make an artificial glutinous composition, much resembling, if not fully as good, nay better than the Excrement, or whatever substance it be out of which the Silk-worm wire-draws his clew."

Fulfilment of a Prophecy

Two hundred years later Sir Joseph Swan, while experimenting with materials for making electric-lamp filaments, triumphantly produced a glossy, silken thread by squirting a solution of nitro-cellulose. Sir Joseph patented his discovery in 1883, but did not commercialize it. In the following year, however, Count Hilaire de Chardonnet became the first commercial developer of rayon and established works in France, Switzerland, Belgium and England.

The next advance was made in 1892 by two Englishmen, C. F. Cross and E. J. Bevan. They discovered a method of spinning, from a solution of cellulose, a smooth thread which they called "viscose." They enlisted the services of Stern, one of Sir Joseph Swan's associates.

Finally Topham, working with Stern, invented the system of rayon-spinning still most widely in use.

PART PLAYED BY COURTAULDS

It is at this point that Courtaulds link up with the story of rayon, and the development of the present colossal industry begins. The Courtaulds are of Huguenot origin. George, great-grandson of an early Courtauld who settled in England, built a silk factory in Essex in 1798. But it was Samuel, son of George, who laid the foundations of the present business. Samuel Courtauld became interested in the manufacture of mourning crepe and built up a wide reputation.

The firm prospered and in 1891 it was converted into the private company of Samuel Courtauld & Co. But it was realized that Courtaulds would have to develop on other lines, and for this two eminent textile men—Henry Greenwood Tetley and Thomas Paul Latham—were brought in. It was Tetley's steady belief in " artificial silk," backed by Latham's exceptional business ability and the support of the other directors, that have marked them as two of the most remarkable men ever known in the textile industry. In 1904 the Company bought the British rights of the Cross and Bevan viscose patents and established, at Coventry, its first rayon factory in Britain, the late Mr. Harry Johnson, a Macclesfield man being manager.

Reward for Enterprise

Success came quickly. New and better methods of manufacture have constantly been adopted and obsolete machinery immediately scrapped. Extensions of manufacturing plant and the exploration of new uses have gone side by side. After weaving, use was found for the yarn in hosiery (but only after nearly every hosiery manufacturer had been offered free samples and had refused to be bothered with the stuff), in laces and in knitted goods. A typical example of Courtaulds' enterprise was the purchase in 1917 of a factory in Halifax for the manufacture of furnishing fabrics. Up to this time no manufacturer of upholstery fabrics would touch rayon. At Halifax new furnishing fabrics were produced consisting of rayon mixed with cotton, with wool and with silk ; the new fabrics were so attractive that other manufacturers were compelled to copy them and make use of rayon.

In order to demonstrate to the cotton and worsted trades what could be done with staple fibre, or " Fibro," which is Courtaulds' registered brand name for their staple fibre product, they purchased a large cotton mill at Rochdale, and later, a worsted mill at Bradford.

How Viscose Rayon is Made

Let us follow the rayon clue to the beginning. First we go over the sea to high-pointing Canadian spruce forests, for it is the lofty spruce that eventually becomes those fine fabrics that are such a joy to wear and use. Yes, it is from wood—difficult though it is to believe—that the thread of rayon is created.

The trees are felled. Then the journey starts. First the logs go floating downstream to the pulp mills. There they go through about ten processes before they are reduced to almost pure cellulose. They are stripped of their bark, cut into small pieces, boiled in chemicals to remove all trace of resinous impurities, washed, bleached and scoured. Lastly the cellulose is dried by being run over steam-heated cylinders. It now resembles sheets of thick blotting paper and is guillotined and baled up for its long journey to Courtaulds in England.

In the English factories the cellulose receives almost as much care as a new-born baby. Weight, time and temperature are all carefully checked. Even the degree of moisture in the atmosphere is controlled during the next very important operations. Samples are constantly tested and nothing is left to chance.

Caustic Soda Plays its Part

First the sheets of cellulose are cut to standard size, gauged and weighed in batches. Then it is time for the cellulose to take a bath. But it is not water in this bath, instead a solution of caustic soda. Thousands of tons of caustic soda are produced annually in Great Britain for the rayon industry alone, for it is caustic soda in solution which plays such an important part in the transformation of cellulose. The caustic soda dissolves away everything that isn't required, while the remaining cellulose combines with it to form what is known as alkali cellulose. Drastic treatment follows bath-time. Hydraulic presses remove surplus moisture. Pulverizing machines (very similar to dough mixers) tear the sheets of pulp between large spiral blades and heavy serrated bars until they have the appearance of crumbs. Throughout this process the temperature is controlled.

Following this the crumbs are emptied into large tins and stored for a period under identical atmospheric conditions, in order that the chemical action of the caustic soda may be completed.

Soluble in Water

The cellulose alkali crumbs are next transferred to the churn room. They are placed in large hexagonal churns to which is added a measured quantity of carbon bi-sulphide. When the churn is turned, the crumbs are changed from a creamy-white insoluble material to an orange-red

Left to right:—Count Hilaire de Chardonnet, Mr. Edward John Bevan, Mr. C. F. Cross, Mr. Henry Greenwood Tetley and Mr. Thomas Paul Latham.

sticky mass soluble in water. This new substance is called cellulose xanthate.

It is on the result of the discovery (made by Cross and Bevan in 1892) of cellulose xanthate's solubility in water that approximately 88 per cent. of the world's production of rayon depends.

The Formation of Viscose

The cellulose xanthate is emptied from the churns into large mixers, where it is dissolved in water. A series of paddles keep the water in continuous circulation until the charge of xanthate is thoroughly dissolved. Now it is *Viscose*—in appearance and consistency very like run honey. It must now mature for several days and for this purpose is taken into cellars—called caves—and stored again under controlled conditions, in large containers.

During this period it is meticulously filtered to remove all undissolved cellulose or other solids. The filtration is carried out by passing the viscose through several layers of specially woven cloth as well as thick sheets of wadding placed between perforated sheets. The process is repeated three or four times. In addition, vacuum pipes extract any air or gas which may have got into the solution, for if the solution contained any suspended matter whatsoever, the step which follows would be spoiled.

The Thread of the Story

The reason for this very exact filtration is seen next when the viscose is forced through a spinneret into a bath of acid to coagulate into a fibre about as fine as that made by a silk-worm. This is the most amazing step in the whole wonderful process of the creation of rayon. Wood has been reduced to a liquid, and now the liquid is changed into a thread which can be woven into cloth that compares with—and frequently has advantage over—that woven from natural silk, cotton or wool.

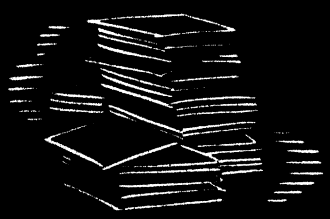
It is very much easier to appreciate this all-important feature of rayon production by repeating it in a simple experiment. A fine stream of viscose is poured into a beaker containing dilute sulphuric acid. As the liquid viscose enters the acid it coagulates, then solidifies, and in a second or two forms a continuous thread. This is a thread of rayon !

Care Makes Perfect

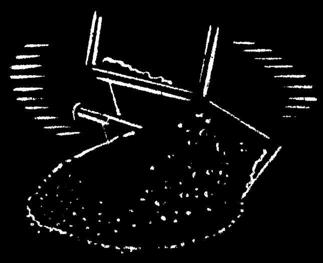
In the commercial manufacture of rayon the viscose is forced through tiny holes in a spinneret. This is roughly the size of a small thimble and there are as many as 500 of these tiny holes in its head. (Thus you can understand the importance of the very exact filtration already described. The slightest speck of matter in suspension, or bubble, would cause stoppage of the microscopic holes.) The number of holes in the little spinneret (or jet) —usually made of a platinum-gold

1. Spruce logs ready for the pulp mills

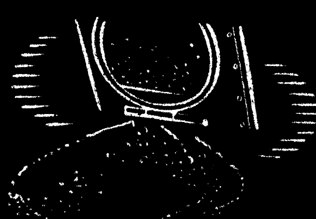
2 Sheets of pure cellulose



3. Cellulose crumbs plus caustic soda



4. The next stage—Cellulose Xanthate



alloy—decides the number of fibres in the rayon yarn. The size of the yarn is technically described as so-many denier.

Spinning and Winding

The fibres that come from the spinneret are drawn over a glass wheel and dropped down by a glass tube into a rapidly revolving box. As the glass funnel rises and falls, the rayon is drawn into the box by centrifugal action and wound to resemble a cake from which the inside has been cut out. In fact it is called a cake of rayon. Also, the diameter and speed of the box in ratio to the delivery rate of the glass wheel determines the amount of twist which is given to the rayon. From the spinning machines the cakes go into conditioning cabinets, before being wound into hanks. (It is easiest to wash, bleach or dye yarn in hank form.) After hanking, the yarns are given preliminary washing to remove surface impurities. They pass slowly through a spray washer and next travel through ovens on the way to bleaching. This consists of another wash, a spraying with sodium sulphide, a dose of bleaching solution, a " souring " process to neutralize the bleaching action, and a final washing in fine soap solution. Clean cloths now protect the hanks as they are dried by hydro-extraction and in long steam-heated ovens. Did you notice the extreme care taken in bleaching and washing? It is to preserve the natural whiteness of rayon so that it can be dyed in more delicate shades or intense colours than can be obtained with any other yarn.

As Rayon Leaves the Mill

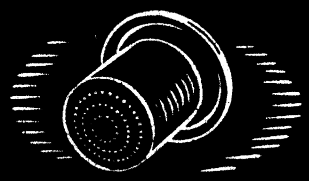
After passing through an elaborate series of tests and inspection, the loose hanks are placed in small presses for packing and labelling, graded according to their denier and quality.

Courtaulds supply rayon for every form of textile manufacture and they prepare the rayon according to their customers' methods of working. For weaving they wind and size the rayon on warp beams or wind it on weft tubes. For hosiery manufacture or circular knitting the yarn is wound on large cones. For warp knitting it is supplied on little bobbins or ready prepared on beams.

Spun Rayon: The Manufacture of "Fibro"

Rayon is a yarn made of *continuous* filaments twisted together. But spun rayon follows cotton and wool. It is formed by the twisting together of *short* fibres, all of equal length. To make spun rayon, the rayon filaments are deliberately chopped into lengths and then spun into a continuous thread once more.

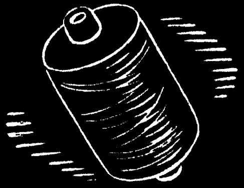
You will probably say, " Why go to all the trouble of producing continuous threads of rayon filament only to chop them up and re-spin them? " Your



5. Spinneret.
Size of holes
determines denier

6. Viscose of the
consistency of
honey

7. Cake of Yarn
Spinning mac



8. Yarn ready f
weaving or k

question is justified. The reply is that there are many very good reasons for producing spun rayon. Spun rayon is a yarn of great adaptability. It is made into fabrics resembling cotton, fabrics resembling linen, fabrics resembling wool. It is, too, a most successful partner when married with any of these yarns. Fabrics of most unusual surface interest and beautiful colour effects can be created in this way. These depend on the blending of yarns, either before or during spinning, or spun yarns of different staple length being spun together.

Spun rayon makes excellent fabrics that do not wrinkle or crush easily. They are more comfortable than wool in warm climates—although similar in appearance —while the " Fibro " content lessens the shrinkage possibilities of many fabrics.

Since in the manufacture of " Fibro " spun rayon, the fibres can be made finer or coarser at will, the finished fabric is more even in all characteristics than one woven from a natural—and therefore uncontrolled textile fibre.

The method of manufacturing " Fibro " is the same as that of continuous filament rayon until it leaves the spinneret. Then filaments from all spinnerets on a frame are drawn together—not twisted—into rope of thumb-thickness. It is bleached and washed. Then the rope of filaments is drawn into a cutter and chopped into equal lengths. The length of the staple varies according to the type of machinery to be used for spinning. Cotton spinning looms require lengths of one to two inches, worsted machinery requires lengths of two to seven inches.

In spinning " Fibro " has several advantages. It comes to the mill absolutely clean. It does not have to be scoured or bleached. Moreover, it does not have to be sorted, all the fibres being of standard length. The usual fine dust of cotton waste which hangs like a pall over the frames in a cotton mill is entirely absent when " Fibro " is being spun.

Courtaulds' registered " Tested-Quality" trade mark was created to make it possible for the public to buy fabrics and garments made with Courtaulds' rayon and spun rayon yarns, whose qualities had been thoroughly tested before being passed for retail sale. The mark was introduced because Courtaulds, with overseas associates, realized that since rayon is now universal, a definite quality level should be set for goods made from Courtaulds' rayon.

Courtaulds want to ensure that the loveliness of their rayon fabrics and garments will last, so that wear and washing will not bring disappointment through shrinkage, fugitive colours, bad seaming or other deficiencies. Under Courtaulds' Quality-Control Plan, manufacturers using Courtaulds' rayon yarn submit complete ranges of samples. These are then tested against Courtaulds' specifications—based on their experience of textile production and public requirements —by the Testing House of an *independent organization*, the Retail Trading-Standards Association.

If the Testing House reports that the samples come up to specifications, the manufacturer then signs an agreement to use the " Tested-Quality " mark on goods identical with samples tested, and these can be identified by the special tickets and tabs bearing the mark. Tests cover points of fabric construction, tensile strength, washability and dry-cleanability, colour fastness, resistance to fraying, suitability for ironing, etc. Each sample passes at least seven and sometimes as many as twenty-two tests.

In the middle years of the nineteenth century, employers as a class were not over-zealous in consideration for their workers. It is pleasing to find, therefore, that Courtaulds were one of the pioneers in making provision for the care and well-being of their employees. As early as 1852 the firm had fitted out a hostel for young girls, an institute—with a library included —and an evening school. More, and this is particularly interesting in view of modern war-time welfare schemes, the firm established a nursery, where mothers would leave their children under care while at work in the factory, and where the children were provided with a midday meal. But that is not all. Courtaulds, perhaps for the first time in industry, employed someone to visit the workpeople in their homes and to provide comforts in cases of sickness—the mid-Victorian proto-type of the modern welfare officer. During the winter months, arrangements were made for workers to be supplied with hot soup at a penny a pint—forerunner of the canteen service of to-day.

The Testing of Proofed Fabrics and the Need for Rigid Standardization

By C. S. JONES, M.A., B.SC., F.R.S.A. (London)

(*Specially Contributed*)

WITH the advances made in the proofing of textile fabrics, either for water-repellency, moisture-immunity, against fire and flame and rot and mildew, the most outstanding of which is the former, some method of standardization of tests has long been felt in the trade. This has been accentuated by the variability of the specifications issued by the Government during the war, many of which insisted upon a combination of occasionally two or three or more of each of the "proofing" processes to meet unusual demands for specialized equipment. In addition, not only have the sellers of proofing compounds but manufacturers employing these compounds been driven to the wish that some rigid lines should be set up once and for all, and that a recognized testing standard agreed upon as fair to all parties, reproducible and sufficiently quick as easily applied should be the basis of such a standard.

It is appreciated in manufacturing quarters that there may be a desire or a tendency on the part of some processors to confound the issue deliberately by advocating test methods which happen to give flattering figures for their own productions and low figures for those of their competitors, without regard to actual merit, but it is characteristic of the first-class firms engaged in the proofing section of textile manufacture that they only want recognized standards which really prove the merit of their goods. It is thought in the proofing trade generally that tests for efficient water-repellency will be based on those which have been in vogue for several years, with added improvements or amendments as experience may seem to warrant. It has, however, been abundantly clear that none of the usual test methods now in use are properly efficient or sufficient; in fact, they are usually misleading to a high degree. The three standard methods at present adopted may be divided into the Drop Test, the Hydraulic Pressure Test and the Cone Test, of which there are many modifications in detail but none in principle.

Drop Test

In this test drops of water under specified conditions are allowed to fall upon cloth and the time noted when either the first drop comes through into the free space or shows on a piece of filter paper immediately behind it, or saturates a piece of filter paper fastened behind it.

Hydraulic Pressure Test

The cloth is stretched over a drum, and steadily increasing water pressure is applied to it, until the first drop is observed to come through the fabric.

Cone Test

In this test, the cloth is folded into a cone, a certain quantity of water poured into it, and the amount which comes through in a given time estimated.

Limitations of Tests

It is obvious that all these tests are for water-tightness, and any of them would show 100 per cent. efficiency for a thin sheet of glue. Clearly, they are tests for the existence of non-penetrable film, and as such would be reasonably applicable to oilskins, tarpaulins or tent cloths, but they clearly have no validity whatever in dealing with woven fabrics such as showerproofed or rainproofed cloths, uniforms or other wearing apparel which is the modern developing of proofing adopted by those firms who do not employ rubber or compounds of rubber in their processes. The methods referred to test rather the weave and not the proofing which the fabric has undergone. Scientifically, they are unsound since they suffer from the serious disadvantage that the test samples do not represent the bulk. A single pinhole which might have arisen after the manufacture of the fabric will cause a piece that is otherwise practically perfect to be rejected. In the nature of the case it is not possible to weave a faultless piece of cloth; and it must be clear that the test, to be of any value, must give an average or representative value of the merchandise and not merely a figure which represents solely a property of the particular sample taken.

This is quite clear in the Drop Test since the condition of the point of impact of the water will determine the end result. This end result is again influenced by the size of the interstices or spaces of the weave in relation to the height from which the drop falls, for it is possible, of course, for a drop to bounce through a hole instead of running directly through it. The results are influenced by the precise method of holding the cloth. The least difference in tension of weft or warp created whilst attaching the cloth to the testing machine will produce results differing by many hundreds per cent. Again, the test is vastly influenced by the mechanical conditions of the surface. A cloth which has been rejected on the Drop Test after being smartly brushed with a stiff brush has been known to pass the test easily, whether it is proofed or not. This knowledge, which is widespread, gives rise to practices which are, to say the least, decidedly dubious. Further, a cloth which is quite perfect on the Drop Test, if well ironed, will probably fail. Again, if the filter paper used, as is done in the majority of cases, is hairy, the test result will be good; if it is ironed before use the test will be bad; and these results will vary with the precise pressure that exists between the cloth and the filter paper upon which it lies or is pressed.

It is again clear that as the Drop Test only tests about 0.5 sq. cm., in order to judge the merit of a full piece of cloth not less than 5,000 tests should be made upon that piece if full justice is to be done. This may sound excessive, but it is the answer of a formal probability calculation of results of extensive experiments which have been carried out strictly. In practice the Drop Test is found to vary between operator and operator of as much as 300 per cent. to 400 per cent. and so much is this appreciated in the proofing trade that when a cloth is rejected as unsuitable on the basis of the Drop Test it is frequently merely held back in stock for a few days and returned, and it has been known that these previously rejected goods have been passed as perfect in water-repellency.

In similar ways, the Cone Test and the Hydraulic Pressure Test are completely unreliable for the very same reason that they do not represent the piece tested. It will be appreciated that the larger the piece taken for the test, i.e., with the increased probability of including one of the unavoidable weaving faults, the greater the probability of the results being unreliable.

Finally, the writer affirms that none of the above-mentioned tests may be tests for water-proofness or water-repellency at all. The best figures may be given by "proofing" substances, which, so far from being waterproof, are hygroscopic; whereby, they themselves swell and fill the interstices of the cloth or cause the cloth to swell. The more perfectly a lightly woven fabric is proofed, the worse the results will be in these cases. This is also well known and it is not uncommon with some proofers to add dextrin, glue or similar bodies to the finish, partly, it is true, to give a desired handle, but equally to enable it to pass the standard proofing tests.

The above is a situation that should not be tolerated either by scientifically minded people or by those in the proofing trade who honestly stake the reputation of their brand of proofing. The position has become more acute, particularly with the advent of Government contracts in which proofing processes enter on so large a scale and with the insistence, as at present, on a three-hours test as a criterion of merit. Hence, it is felt in the trade that the time is ripe for a complete and comprehensive review of all tests now employed in this section of the processing trade. A further reason is the inappropriateness of the above test, demanding as it does such protracted time, labour and unnecessary supervision so that the work imposed on the testing staffs not only leads to undesirable consequences but brings about unnecessary delay—a further reason for disquietude in these strenuous days.

Bundesmann Test

In the writer's opinion, based on many years' scientific research and much practical experience in the processing industries, the only test which will give a practical figure is the Bundesmann Test and he is of the firm opinion that if and when a test on these lines is universally adopted the waterproofing technique throughout the whole of the textile industry will begin to make some progress. Of German origin, the Bundesmann testing apparatus has been employed in the testing houses of several leading firms in Britain for the past five or six years. It is impossible to secure the necessary apparatus at the moment, but it is understood that it will very shortly be manufactured in Britain on possibly modified, but nevertheless essentially accurate, lines, and will then be available to all proofers and others who are engaged in the textile trades.

Briefly, the processes adopted in the Bundesmann Test are as follows:—The fundamental of the Bundesmann standard is that of subjecting the fabrics to rain of approximately tropical intensity, whilst at the same time the fabrics themselves are subjected to a frictional movement comparable to that imposed on materials by the wearer of clothing during severe physical action. The apparatus comprised an overhead tank having some 300 jets each of 0.4 mm. diameter, from which water drops a depth of 5 ft. on to a series of rotating cups, each of 100 mm. in diameter, which are covered by samples of the fabrics held firmly in position by spring clamps. The series of four cups are fixed to four arms which rotate on a central shaft, and each cup is fitted with a mechanism which, during the test, produces a constant friction on the underside of the fabric test-pieces by the action of a series of ribs rotating in an alternating direction to the cups themselves. All water which does not penetrate the fabrics flows across the cups into the runaway tank in which the rotating apparatus is fixed. The general method of testing may be described as follows:—

1. Fabric test-pieces which have previously been weighed are placed over the testing cups and held tightly in position by spring clamps, the cup-rotating apparatus being then fixed into the reception tank. 2. The motor is switched on and the water allowed to stream over. 3. The water stream flows on to the rotating cups below for ten minutes in two separate periods of five minutes each. 4. At the end of the first period of five minutes the motor is switched off and the quantity of water, if any, is measured that has penetrated the fabric test-pieces into the cups. This figure represents the "water penetration" normally after the equivalent of 1¼ hours' heavy rain. 5. At the end of the second period run of five minutes, the quantity of water is again measured that has penetrated the test-pieces. This is found to be also the equivalent of 1¼ hours' heavy rain. 6. The total water penetration is then noted. 7. The test-pieces of fabric are then weighed to make comparison with their original weight before commencing the test. The increase in weight represents the absorption property of the fabric and is treated as a percentage increase over the original weight of the test pieces.

The most readily appreciated comparison is that made by direct simultaneous test with an identical piece of fabric which has not been proofed. A still more important comparison is to be obtained by simultaneously testing the identical fabric which has been proofed for water-repellency with the unproofed test-piece.

The results of the Bundesmann test vary as between operators plus or minus 5 per cent. The test has the advantage that it does, in fact, average the 40 sq. in. used in the test. An occasional pinhole has something of its proper effects in relation to the piece which is being tested. The addition of hygroscopics to give a good non-penetration test is revealed by the increase in weight. The rubbing action of the rubber in the apparatus eliminates mere surface finish effects and simulates the conditions under which the material is used in actual practice. Unquestionably, the Bundesmann test is the best one to be adopted. It has the overwhelming merit of being able to give a practical figure reproducible at different times and by different persons within 5 per cent. and which does bear a direct relation to the behaviour of the material in actual use, in contradistinction to any of the tests discussed in this article, whether they be the Drop Test, the Hydraulic Pressure Test or the Cone Test.

Internal Lines of Communication

By BERNARD DAWSON

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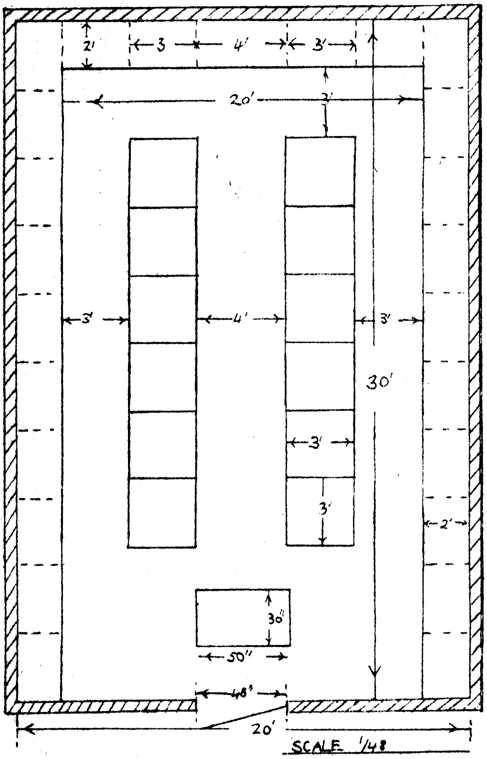
A FACTORY in war-time is very much like an army in the field. While the machines are producing they are just like an army advancing and, like an army, they have lines of communication that must be kept intact and free from enemy aggression. For a general to allow his lines of communication to be cut is a very serious disaster, and for an officer of a department to allow his machines to stop through any fault of his own is, to him, just as big a disaster and disgrace. Now we are all familiar with the term "lines of communication" in its military sense, but we need not understand how these lines are maintained. We must know, however, what our own lines of communication are and how they must be kept open. Just as in a military machine there are more than one line to maintain so in a mill there are also numerous lines. In this article we shall deal with one of them and the action that should be taken to keep it free from disruption.



To succeed in our main object of keeping the machines working we must have a continuous stream of supplies in the form of spare parts. It is, therefore, necessary to build up some simple, but at the same time foolproof, method of procuring and maintaining a stock of such parts, and arranging a suitable place in which to store them. We must also keep an efficient record of orders placed with the various suppliers, the details of our future requirements and our present stock.

Let us first of all take the housing of these stores. It is a good practice for the departmental head to have, directly under his control, all the spares necessary for his machines, and to have some small room in his department set aside for the purpose.

A room 20 ft. x 30 ft., a plan of which is shown here, should suit average requirements.

A strong door and skylights are essential. A four-tier rack running along the walls should first be erected. The depth of the shelves should be about 24" and the distance between each partition 36". Old iron pipes about 2" in diameter and 11 ft. long should be set in the floor and braced at the top. If they are set in the grounds for a depth of 2 ft. and well cemented they should be quite firm. These uprights are further supported by horizontal cross pieces made from angle irons, bolted to the uprights and forming the frame upon which the wooden shelves will be fixed.

The shelves should be placed at the following heights from the ground :—

Top shelf	Nine-foot mark.
Third shelf from the floor	Seven-foot mark.
Second shelf from the floor . ..	Five-foot mark.
First shelf from the floor ..	Three-foot mark.

It will be clear that at these heights, holes must be drilled on the uprights to allow for the bolting of the angle irons which will form the racks. At the 3-ft. intervals, where the upright posts and angle irons intersect, another angle iron, 2 ft. 4 ins. in length, will be required for every intersection. These angle irons will run at right angles to the wall and will be cemented into the wall about 4 ins. When this has been done all around the walls, we shall have completed the framework of our racks, which are now ready for filling in with ¾ in. boarding which should be made to fit nicely upon the angle irons. If it is thought necessary to divide the boxes thus formed, wooden boards, ¾ in. x 24 ins. x 24 ins., can be made and fixed up as partitions, but they should not be made into a permanent fixture, as some boxes may be required bigger than the standard size. In the centre portion of the room, similar racks may be built. The positions of the uprights and cross angle irons may easily be seen from the plan of the room, the scale of which is ¼ in. to the foot. In this plan I have shown two rows of broad racks 3 ft. wide, 24 ins. between each shelf, and the usual length of 3 ft., between each upright. The height is also 7-ft. from the ground to conform with the other racks around the walls.

It will be seen that a good space has been left vacant at the end of the room near the door. This is for convenience to facilitate the carrying in and unpacking of cases, and it also makes room for a table and counter for the storekeeper, who will be the only person allowed in the portion of the room behind this barrier.

Having constructed our store room, we must next consider how to maintain it in an efficient and systematic manner. I shall describe a method which gives ideal results, and is at the same time fairly foolproof and capable of being carried out by an intelligent clerk, a method which combines three essential points : (*a*) sectional, (*b*) numerical, (*c*) alphabetical.

For an example we shall consider that our store room is to be used for the spinning department of a cotton mill. There will, therefore, be the following sections taken in the order of process :—

Section 1 .. Blowing room.
,, 2 .. Carding.
,, 3 .. Drawing frames.
,, 4 .. Slubbing frames.
,, 5 .. Intermediate frames.
,, 6 .. Roving frames.
,, 7 .. Ring frames.
,, 8 .. Ring doubling frames.
,, 9 .. Combing machines.
,, 10 .. Waste plant.

There are ten separate sections, each requiring its own share of space. It is fairly safe to give about one-third to the ring frames, one-third to the speeds and one-third to the remainder. Allot the space to the respective sections and in the centre of each space, well above the racks, erect a clearly worded notice of the name of the section in painted tin. Now comes the work of numbering the divisions of this space (which are the boxes already described). These boxes which will hold the different parts used on the machines in this section, should all be numbered from one to whatever number the last box may be. In the first compartment place whatever part begins with the earliest letter of the alphabet, for example, those beginning with C should come before those beginning with F and so on.

Our next point is the clerical side or the keeping of accounts and placing of orders, store checking and stock scrutiny. First draw up the ledger. By glancing at the chart, which is really a specimen page of our ledger, the method of posting will be readily understood.

One page is entirely given over to each separate item. Entries are made for twelve months on each page, from January to December. The entries of items in this ledger should be in consecutive order, first section-wise, then ,the items entered alphabetically, e.g., " arbor roller" coming before " camm heart," etc. This will enable the different items to be found quickly.

Section .... Machine .... Maker .... Year ....

Name of Part	Box No.	Cat. No.	Sup. No.	JANUARY				FEBRUARY			MARCH			APRIL			MAY			JUNE			JULY		
				Last Bal.	Received	Issued	Balance	Received	Issued	Balance	Received	Issued	Balance	Received	Issued	Balance	Received	Issued	Balance	Received	Issued	Balance	Received	Issued	Balance

The balance column is posted at the end of each month from the data noted on the index cards which will be described later. These cards are hanging on hooks in the little shelves given over to the separate items. The number of any particular shelf is found by consulting the ledger column entitled " No. of box."

Let us next take the placing of orders. To keep accurate records of this work a well designed store order book is necessary. A specimen page is given below.

Small cards are printed with the headings and rulings as the sample card shown at the bottom of this page.

One of these cards is hung on a hook attached to the particular box for which it is intended. The number of the box, the name of the section and the name of the parts are written in the space provided. In the columns we must enter the necessary particulars and each time an issue is made, the entry is noted and the subtraction made from the balance column.

Section.	Machine.	Item.	Cat. No.	Box No.	Date Order Placed.	Quantity	Price Quoted Rs. a. p.

Received	Pending	Date	Received	Pending	Date	Received	Pending	Date	Store-keeper

Across the top of the page we have the following headings : Section, machine, item, catalogue No., box No., date of order, order placed with, quantity ordered, price quoted.

Under these headings and all across the page we have the following columns for the accounting of deliveries : Received, pending date. It will be noticed that a complete page has been given to each item, and it is a good plan to have these pages in a loose form so that further sheets may be added later, and so that any orders over many years can be kept together for comparing prices, etc.

A similar order book should be kept for any orders placed with our own engineering department although, of course, engineering department orders could be recorded in the general order book.

The next problem is store checking. The most successful results can be obtained by employing the card index system specially adapted to our own work.

This acts as a day-to-day check on all issues and balances. Fresh receipts are also noted and the necessary adjustments made. It is obvious that, with the aid of this card, the balance in stock of any item can be seen at a glance.

At the end of the current month, the storekeeper consults these cards to make up his store ledger, and to give the monthly figures of stores received, issued and remaining with him.

From these same cards the officer can easily check any item by comparing the figures in the balance column with the actual number in stock at that time, and is thus enabled to keep a watchful eye on the storekeeper and his accounts. At the end of every month, the storekeeper must show the store ledger to the officer, who must in turn scrutinize the balance and issue columns and make notes concerning the ordering of future supplies. For instance, if a particular item shows an

(*Continued on page* 185)

Section ....Box No.................Cat. No.............

Name of Part ....

Date	Last Balance	Received	Total	Issued	Balance	Signature of Store Clerk

Size-mixings for Cotton Warp

By K. C. SAHA, B.SC., L.T.M. (Hons.)

(*Specially Contributed*)

THE question of size-mixing has long been considered a secret by weaving masters. Some weaving masters are particularly keen on the selection of sizing materials, the judgment of the proportion of ingredients and the preparation of the mixing ready to be used in the size-beck. It will be seen that these are no secrets but a clear conception of the properties of materials to be used and a strict attention as regards their use in different types of work. Here we will discuss the matter under the three heads mentioned above in detail as far as practicable. Before coming to it, however, a brief study of the composition and properties of cotton, those of yarns intended to be sized and the aim of sizing will throw better light on the subject-matter.

Composition and Properties of Cotton

Cotton is grouped in natural cellulose (vegetable fibres) as one having unicellular fibres composed of a single cell. The average composition of cotton can be enumerated as follows:—

Cellulose	85.0%	100.0
Moisture	8.5%	
Fat and wax ..	3.5%	
Ash	1.0%	
Pectin and pectic matters	0.5%	
Protein and colouring matters	1.5%	

Of these, only cellulose and moisture remain in the cotton of a fabric, other matters being removed by bleaching. Cotton fibres appear like flattened ribbons, twisted and having thick cell-wall, cell-cavity and natural convolutions. The outer cell-wall, being poor in water content, is more resistant to the action of foreign agencies. Cellulose is reacted physically and chemically as follows:

Physical.—(i) Heat, (ii) Light and (iii) Frost.

(i) Upto 100° C. cotton loses its natural moisture which, on cooling, it absorbs again from the air. Its property does not show any marked difference upto 150° C. but above this temperature it begins decomposition, the degree of which is dependent on the temperature and the time. Moist heat, however, yields a plastic effect which makes cotton goods to take up any crease or shape by the application of pressure.

(ii) Light containing ultra violet rays in presence of oxygen slowly converts cellulose into oxycellulose.

(iii) Wet cotton if exposed to frosting temperature is damaged in tensile strength owing to the expansion of water that freezes within the cell-wall.

Chemical.—(i) Acids, (ii) alkalis, (iii) oxydizing agents, (iv) salts, and (v) micro-organism.

(i) Cellulose boiled with Conc. H_2SO_4 and HNO_3 yields sulphonated and nitrated cellulose respectively. In cold conc. H_2SO_4, however, cellulose is first swollen up and then dissolved and thus gets itself degraded. Cold conc. HNO_3, acting for a short time, gives it an effect similar to mercerization. Cellulose is degraded into simpler products by the action of dilute acids, the action being similar to hydrolysis.

(ii) Mild alkalies as well as dilute solutions of strong alkalies have no action on cotton except saponification or emulsification of the impurities contained in it. Concentrated solutions of strong alkalies have the mercerizing action.

(iii) Salts in hot or cold solutions have no chemical reaction with cellulose. Only salts which form acids after hydrolysis react with cellulose and weaken it in tensile strength.

(iv) Strong, particularly, vigorous oxydizing agents in heat reacts with cellulose and ultimately converts it into oxycellulose.

(v) Development of mildew tenders the cloth.

Properties of Yarn

A good spun yarn for weaving should possess the following qualities:—

(i) It should have sufficient tensile strength to withstand the strain of weaving. Roughly, the strength may be ascertained from 6s to 25s as $\sqrt{\text{count}}$ divided into 410 less a figure from 25 to 6s in the reverse way (by John H. Strong).

(ii) It should be pliable and elastic to the greatest extent possible to afford flexibility and minimize breakage in the process of weaving.

(iii) It should have the property known as porosity and capillarity by virtue of which the yarn can easily absorb liquids and solutions to allow them to permeate through its substance.

(iv) It should keep the natural lustre of fibres.

(v) It should withstand the conditions of wear and tear.

Aims of Sizing

The aim of sizing is to add strength to the yarn and lay down the projecting fibres on so as to keep the properties of yarn intact.

Sizing Materials

SIZING

Pure.	Medium and Heavy.
1. Adhesives or agglutinants.	1. Adhesives or agglutinants.
2. Softeners.	2. Softeners.
3. Antiseptics.	3. Antiseptics.
	4. Fillers.

Adhesives or Agglutinants

(*a*) Wheat flour or other flours from various starchy grains like *jowar*, *bajra*, rice, etc.

(*b*) *Starches.*—Sago, maize, farina, tapioca, arrowroot, etc.

Of these, wheat flour, sago, maize and farina are being used extensively in the industry. Starches can be distinguished correctly only by microscopic examination, but for practical purposes the tests by feel and degree of whiteness are considered adequate.

Wheat starch ..	Mellow feel.
Sago starch ..	
Farina	
Maize starch ..	Harsh feel.

Another handy method of distinguishing starches is the determination of the gelatinizing point. Starches are primarily composed of granulose and cellulose, with certain percentage of foreign matters like gluten, gum or sugar, fat or oil, ash and water. When starch is heated to a high temperature, cellulose breaks and granulose goes into solution with water known as apparent solution. This process is known as gelatinization.

Gelatinizing Point (Temperature)	
Wheat starch	70° C.
Sago starch	72° C.
Farina	65° C.
Maize starch	70° C.

If starch is boiled with water containing only .5 per cent. of caustic soda, a paste is formed which is much thicker and very much more adhesive than if it is boiled with water alone. A higher percentage of alkali products will give a greater adhesiveness. These substances also tend to prevent the decomposition of the starch paste, specially if the paste contains potato starch. If starch is boiled with cold concentrated solution (20 to 22 per cent.) of caustic soda, it swells up, forming a paste of greater tenacity, resembling in appearance a mass of gluten obtained from wheat flour. The starch so treated does not lose much of its adhesiveness on boiling even when the alkali is previously neutralized with acids. While cold, the neutralized starch is converted into a thin liquid, but on boiling, it is found to be nearly as tenacious as before. Advantage is taken of this fact to place on the market many patent substances for sizing purposes. These are generally starch boiled with water and caustic soda or starch treated with concentrated caustic soda in cold. Some of these substances are Penetrose, Eclipse, Anilose, etc.

These starches can be grouped as regards their uses in pure, medium and heavy sizing as tabulated below:—

No.	Pure	Medium	Heavy
1	Wheat	Wheat	Wheat
2	Sago	Sago, wheat	Sago, wheat
3	—	Maize, wheat	Maize, wheat
4	Farina	Farina, maize	Farina, maize
5	Penetrose	—	—
6	Eclipse	—	—
7	Anilose	—	—

Softeners

Mutton and beef tallow, vegetable tallow (hardened vegetable oils), tallow substitute (groundnut oil, cotton-seed-oil, coconut oil, etc.), castor oil, olive oil and Turkey-red-oil.

Mutton tallow takes the pride of place in its use as softener, though often vegetable tallow and sometimes castor oil and olive oil are used for the purpose. Being much in use on a commercial scale, mutton tallow is commonly marketed in an adulterated state. It is adulterated by—

(*a*) Substances which lower the commercial value of tallow, i.e., soap, bone or marrow fat, cotton-seed-oil and water.

(*b*) Substances which are definitely harmful to the cloth, particularly if the cloth is intended to be bleached afterwards, i.e., paraffin wax or oil, wool grease and recovered Yorkshire.

The adulteration being with various substances which are harmful either to the cloth or to the size mixing, it is always wise to select a brand after a complete series of tests.

(i) Tallow vaporizes between 260° F. to 300° F. though in summer vaporization may begin from 240° F. The higher the vaporizing point, the better the quality of tallow.

(ii) Presence of soap forms frothing in the surface of tallow when heated.

(iii) Presence of marrow fat shows a granular appearance and that of bone fat gives a pasty appearance. Both of them contain calcium phosphate, which can easily be detected by ammonium molybdate test.

(iv) Adulteration with mineral oils will lower the vaporizing point and give a characteristic smell.

(v) Adulteration with water is detected simply by heating tallow which will issue crackling sound.

In a more detailed test, saponification value for the presence of free mineral oils and acid value for the presence of free fatty acids can be determined. Presence of inorganic acids like H_2SO_4 and HCl can be detected by $BaCl_2$ and $AgNO_3$ tests.

Antiseptics

Zinc chloride, boric acid, copper sulphate, phenol, salicylic acid and shirlan (anilide of salicylic acid).

The conditions of a satisfactory antiseptic may be enunciated as follows :—

(i) It should not volatilize during the boiling of the size mixing or during the drying of the sized yarn.

(ii) It should be sufficiently soluble to ensure uniform distribution in the size mixing.

(iii) It must remain unaffected by heat, specially in contact with metallic surfaces, or it should not interact with the ingredients commonly used in size mixing.

(iv) It must not have any appreciable colour or smell and it should not develop any colour by coming in contact with acidic, alkaline or metallic salts.

(v) It must not react with cotton.

(vi) If used in a cloth that is to be dyed or finished subsequently, it must not affect these finishing processes.

Antiseptics are used to stop the growth of "mildew" in the cloth which is injurious to cloth due to the following reasons :—

(i) It forms a type of musty smell in the cloth.

(ii) It stains the cloth.

(iii) It tenders the cloth in the long run.

Zinc chloride is the antiseptic generally used in mills. It is marketed in the form of solution of 100° Twadell and is being prepared by dissolving commercial zinc in HCl (hydrochloric acid). Commercial zinc "spelter" is not pure zinc in itself; moreover, zinc chloride is adulterated by the sellers.

The foreign substances in $ZnCl_2$ can be classified in two definite groups :—(i) Substances, non-harmful, which simply help sellers to make more profit, viz., NaCl, Na_2SO_4 and $MgCl_2$. (ii) Substances, definitely harmful, which render injury to the cloth, viz., free acid, ferric chloride and plumbic chloride.

Free acid tenders the cloth, because cellulose is oxydized and thus the tensile strength of yarn is lost. Iron compounds (ferric chloride) cause iron stains in the cloth which are very difficult to remove if they are formed once. The presence of lead-compound (plumbic chloride), however, is reckoned the most objectionable. It is responsible for very insidious damage to cloth even if it is present in small amounts. It is not easily washed out from the cloth and remains in it as lead-oxide after alkaline scouring. When the cloth goes to be "chemicked," i.e., treated with bleaching powder solution, lead-oxide is converted into the peroxide of lead. If this cloth is boiled with alkali a second time as it happens in the after-treatment in the process of bleaching, the cloth is oxydized and consequently tendered by the peroxide.

Experience tells us that when using wheat flour in sizing, 1 part of $ZnCl_2$ is enough for every 8 parts of dry flour in order to make the cloth immune from "mildew." Starch, however, is not as much a medium for the growth of "mildew" as wheat flour is; consequently 1 part of $ZnCl_2$ will sterilize about 12 parts of starch. This proportion of agglutinants and antiseptics holds good when the warps run reasonably dry. But if the warp or the cloth is allowed to get damped and then packed in bales, this proportion may not always prevent mildew-growth. Smaller quantities of other antiseptics together with $ZnCl_2$ are to be used to inhibit the bacterial growth on the cloth. The following can be taken as the best composition of an antiseptic for such purpose.

Zinc chloride	. . 12.8	20 per cent. of the solid flour.
Boric acid	. . 4.0	
Copper sulphate	. . 1.0	
Salicylic acid	. . 1.0	
Phenol . .	. . 0.6	
Shirlan . .	. . 0.6	

In spite of all these difficulties, $ZnCl_2$ is extensively used simply because of its favourable properties. It is colourless, odourless and deliquescent. Owing to its deliquescent property, it is specially advantageous in medium and heavy sizing as it assists in adding weight. $ZnCl_2$ has a softening effect, too. Thus a cloth containing about 20 per cent. of flour in which only 2.5 per cent. of $ZnCl_2$ has been added will show the percentage of size as 25 per cent., because of the fact that $ZnCl_2$ has attracted extra moisture of its own weight.

Antiseptics like boric acid, copper sulphate and phenol are not commonly used, due to their colour and odour. Salicylic acid is in use only rarely when $ZnCl_2$ is not available or is out of stock and only 1 part for 15 parts of $ZnCl_2$. Shirlan, of course, has an extensive use, because it fulfils all the requirements of a good antiseptic and can be had without adulteration. The only drawback in it is that it is not soluble to a great extent like $ZnCl_2$, but its moderate solubility does in no way prevent it from being uniformly distributed through the mixing. Shirlan is about 40 times as toxic as $ZnCl_2$ and hence its substitution is cheaper in the cost of mixings, though pound for pound it is more costly than $ZnCl_2$. Considered in all aspects, Shirlan seems a better antiseptic than $ZnCl_2$.

Fillers or Adding Materials

China-clay, french chalk, barium sulphate and calcium sulphate. Magnesium sulphate and zinc chloride are also used as weighting materials though they are intended more for antiseptics.

China-clay is in a class by itself and is most prominent in its use as weighting material. It is composed chemically as aluminium silicate. While mined it is found mixed up with sand, undecomposed felspar and mica. China-clay is prepared for the market by simply removing these foreign ingredients which are injurious to the healds and reeds. These foreign matters are gritty in nature and their removal is effected by the physical process of "Levigation" and, therefore, removal of these matters is not secured. A simple test could prove whether china-clay is free from grit.

Test.—China-clay is mixed with water and a thin paste is made. A part of this paste is placed on a glass plate which is covered with another glass plate. Now, the glass plates are moved with a rotary motion in opposite directions with a considerable amount of pressure. This will make a grating noise from within if the china-clay is not genuine. The absence of such noise proves the absence of gritty matters in china-clay.

Chemical value of china-clay for sizing purposes depends more on its physical properties than on its chemical composition. Clays are, therefore, evaluated by (i) colour, (ii) feel, (iii) freedom from gritty matters and (iv) freedom from calcium and iron compounds. Number (iv) is of chemical character and can easily be tested for its presence. The remaining three characteristics are simply of physical type and their tests depend on comparative character and personal experience. As regards colour, small heaps of clay under examination are to be placed on a blue paper adjacent to each other and pressed flat. The colour can now be readily distinguished by contrast against the dark background.

Low grade china-clays are yellowish in colour and are often improved by topping them with some blue colouring matters. Such clays are likely to fade by exposure to light or other chemical agencies and expose their natural colour any time after use. Genuine whiteness of a clay has, therefore, to be carefully distinguished from faked or fabricated whiteness. The topping is generally being done either by a basic colour or a direct colour or ultramarine. They can be detected by a simple chemical test as such.

Equal quantities of clays are taken in watch glasses and water is added to each of them. Number one glass is left as it is, number two is mixed with hydrochloric acid, number three is being added up by ammonium hydroxide and acidified bleaching powder is added to the last.

Nos.	Experiments	Observations	Inferences
1	Clay and water.	As it is	Genuine clay
2	Clay and HCL.	Change in tone.	Ultramarine is used.
3	Clay and NH_4OH.	Change in tone.	Basic colour is used.
4	Clay + acid + bleaching powder.	Change in tone.	Basic or direct colour is used.

French chalk is obsolete. Barium and calcium sulphates produce a harsh boardly feel to the yarn and result in wear and tear of the healds and reeds. The only favourable point in their use is that they are of high specific gravity, i.e., weight.

Magnesium sulphate is chiefly used for bleached, coloured and mercerized sorts where it is desired to add some weight without detracting from the appearance of the yarns. Being soluble in water it is readily absorbed by the fibre, giving it a substantial feel and weight. It is, however, not a good substance to use in conjunction with starch as they tend to react on each other and produce dusty mixings.

Certain substances like caustic soda, Activins and gums (Kerin or Arabic) are often found in use in the size mixings. The object with which they are used is to improve the "feel," "penetration" and adhesiveness respectively. They are always used in small quantities.

Proportion of Ingredients

The proportion of ingredients in a mixing hardly follows any firm and fixed rule. A 15 per cent. mixing may be made to put up only 10 per cent. of size on the yarn if so intended. The fallacy lies in the conditions of the sizing machine, namely, the surface speed of the drag roller, wrappers of the squeezing roller and the quantity of steam into the sow-box. The chief point in this connection would be to see that the waste of sizing materials is reduced to a minimum figure and that the yarn sized maintains a normal condition, that is, neither damped nor scorched.

The figures tabulated in the following chart have been worked out while the conditions of the sizing machine are such:—

(i) Surface speed of the drag roll as 28 to 29 yards/minute.

(ii) Squeezing roller being wrapped with flannel (not new) only.

(iii) The flow of steam into the sow-box is just sufficient to make mild frothing on the surface of mixture.

Percentage size as well as that of sizing materials to prepare such mixing have been shown in the same column of the chart. The figures after experiments have been carefully calculated correct to the third place of decimal; yet, any further correction or alteration will be thankfully acknowledged.

Preparation of Mixing

It is always a sound rule to get flour fermented before it is used in mixings. In a beck with a stirrer moving continuously, the requisite amount of water is kept and flour is added, bags after bags, to make the final ratio of water and flour pound to pound. The mixture is now kept stirred for about a month, minimum period for this process should be below 15 days. 0.5 per cent. of Activin S on the weight of flour is to be added to the mixture to accelerate the process. Generally, in a standard beck of 5′ x 5′ x 5′ we take 16″ (200 gallons) of water and add 5 bags (1,000 lbs.) of flour on the first day, 3 bags (600 lbs.) on the second day and 2 bags (400 lbs.) at last and keep the mixture with stirrer working for three working weeks in the least. 3, 4

Chart

Sizing Materials	PERCENTAGE, SIZE AND MATERIALS							
	10% ordinary	15% for 20s & 30s bleached	15% for colour and bleached	20% calender	30% calender	40% for 60s	60% ordinary	100% calender
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Water	92.1299	90.0662	90.0662	88.8399	81.9704	69.8795	66.9230	37.5253
Wheat flour ..	5.4151					5.5607		
Maize						4.6339	2.8846	4.0437
Farina								
Sago	1.4440						2.4038	
Penetrose ..		9.2715		5.1395	13.7931		2.8846	2.4262
Anilose ..			9.2715	5.1395				
Tallow	0.7220	0.6622	0.2649	0.3671	0.9852	2.3169	2.1634	6.4699
Castor oil ..						1.6218	1.9230	
Olive oil ..			0.3311	0.2937				
Caustic soda ..	0.1444			0.0734	0.0985	0.0927	0.1442	0.0809
Zinc chloride ..				0.1468	0.1970	0.6951	0.9615	1.8197
Activin S	0.0722					0.0464	0.0962	0.0809
China-clay ..						11.5847	14.4230	38.4148
Magnesium chloride ..					2.9556	3.4754	5.0480	8.8960
Gums	0.0722		0.0662			0.0927	0.1442	0.2426
Total ..	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000

or 5 such becks are to be installed, according to the volume of work, to keep the supply of fermented flour continuous.

The measured quantity of water which is previously mixed up with caustic soda (wherever caustic soda is used) is stirred regularly with starches in the cold state for some time till a homogeneous mixture is obtained. Starch and gum are to be mixed preferably in the dry condition so as to leave no excuse for gum particles clinging together. The use of gum-arabic, however, is entirely of a different kind: it should be kept in water for about a couple of days so as to ensure uniform mixing. Steam is now let in to make the mixture lukewarm. Steam is cut off and Activin S (wherever Activin S is used) which is previously dissolved in water is added to the mixture. Steam is again let in and the mixture is boiled for a considerably long time till the mixture gets colloided. Steam is cut off, stirrer working throughout, tallow is added and the mixture is kept agitated till the last trace of tallow melts. Steam is again opened and continued for a considerably long time till the mixture gelatinizes. The mixture is kept agitated for about half an hour by the stirrer and with no steam before it goes to the sow-box.

Before adding to a mixture, china-clay is put into a mill where it is boiled with water for 1 to 4 hours, depending on the class of mixing. The object of this boiling is to separate the particles of clay from each other. In light and medium mixings where comparatively large quantity of water is used, it is not necessary to boil quite as long as in heavy mixing where the ratio of water to the total solid is very small. Clays differ so widely in their physical properties and the feel they produce that it is a sound rule for a manufacturer never to change the brand of clay without very good cause. It is a matter of great difficulty to obtain a new clay to get the exact effect of the previous one. It is quite possible to have mixings from different clays, all other ingredients remaining the same, which differ in specific gravity by as much as about 50° Twadell and this will show why great difference will result in the cloth woven. This difference is due essentially to the size of the particles of clays. The clay that contains higher percentage of colloidal particles gives comparatively thicker paste than one in which there is higher percentage of larger-sized particles. A thinner mixing produces a harsh feel whereas a thicker one produces a smooth pliable yarn having good weaving qualities.

The Bombay Industrial Disputes Act, 1938

Procedure for Effecting Changes in Agreements

SECTION 77 (1) of the Bombay Industrial Disputes Act, 1938, provides that a registered agreement, settlement or award shall cease to have effect on the date specified therein or on the expiry of the period of six months from the date on which notice in writing to terminate such agreement, settlement or award, as the case may be, is given by any of the parties thereto to the other party. It is, however, open to the parties under section 77 (2) of the Act, to have the terms of a registered agreement changed or modified by mutual consent.

Some time back a question arose before the Registrar of Unions appointed under the Act as to who are to be considered parties to an agreement, settlement, etc., and what procedure should be followed for giving notice of termination, etc. The Registrar referred the matter to the Industrial Court under section 19 of the Act and the following is a summary of the reference and of the Court's decision:—

"On 9th January 1942 an agreement was reached between the management of the Podar Mills Ltd., Bombay, and its employees under section 30 of the Act regarding revision of rates of four-loom weavers. The agreement duly signed by the management and five elected representatives of the workers was registered by the Registrar on 10th January 1942. Thereafter, on 8th June 1943, three out of the five elected representatives of the workers who were then in the service of the mill, gave six months' notice under section 77 (1) of the Act terminating the agreement. Thereupon I intimated to the management that the agreement would stand terminated on and from 8th December 1943, but the management differed."

Bombay Industrial Court's Decision

"'Representative of employees' is defined in section 3 (29) as representatives not being more than five, elected in the manner prescribed by employees directly affected by the change from among themselves. There are no provisions in the Act or Rules as to—when the election takes place according to Rules—how long it stands good, whether the vacancies are to be filled and if so, when and how, whether in the absence of some of the elected representatives, owing to death or cessation of service, the remainder can act. The reason for this omission appears to us to be that the election is to be made for a particular 'change,' and once the purpose of the election comes to an end, the representatives become *functus officio*. The representatives do not form a sort of Standing Committee of the employees in a position to represent them in all circumstances. The employees affected by different changes may not be the same and, therefore, the representatives once elected by employees affected by one change may not be able to represent employees when other change is contemplated affecting other employees. Otherwise we shall have to have separate standing 'representatives' of spinners, weavers, etc. We have had cases where spinners on one floor of the mills are affected and not spinners on other floors. Moreover, the employees themselves may wish to be represented by a different set of representatives, having regard to change that is contemplated. Some leaders of the employees may hold strong views on hours of work, other on wages, etc. Representatives elected when the change contemplated is in respect of hours of work, may not prove to be suitable representatives when the change contemplated is a demand for wages, sickness benefits, etc. Our view is strengthened by the wording of rules 16 and 20. When a notice of change is proposed to be given by an employer, a copy of the intended notice is served on the Labour Officer who convenes a meeting (rule 14), *explains the purport of the intended notice*, and then representatives are elected who, under rule 16, *are representatives of the employees for the purpose of notice*. Similarly, when the employees desire a change, a representation is made to the Labour Officer who convenes a meeting of the employees (rule 18), explains the purport of the representation and then representatives are elected who, under rule 20, are deemed to be representatives of employees *for the purpose of representation*. Thus when the purpose of notice and representation is over, and the question as regards the particular change settled, they cease to be representatives of employees and become *functus officio*. What holds good for the purpose of change should, *pro tanto*, hold good for notice terminating an agreement which is also in the nature of a 'change.' We do not think the view, that representatives once elected continue to be such for all time and for all purposes and can act even if some of them are dead or have left service, can be accepted. There is some force in the contention of the mills that the representatives must act jointly. Some of the representatives that may have died or left service may have been the most trusted representatives and the remaining representatives could then hardly be said to be the real representatives of the employees. When the employees themselves give notice of the termination of agreement, it is a positive and deliberate act of employees of considerable responsibility and may be fraught with far-reaching consequences and, therefore, the management must be satisfied that it comes from persons who fully represent the wishes of the employees. For that purpose, it seems necessary that the notice should come from all the representatives of employees. We are, therefore, of opinion that for each occasion when a question of change arises (including the question of modification of a registered agreement, or termination of a registered agreement, settlement or an award), there should be a fresh election of representatives, whether the originally elected representatives are in the service or not, and election could be made from the employees directly affected by the proposed change."

C

Improvements in Drafting

V. R. C. : A New Type of Roller Covering

(Contributed)

COTTON, before being finally turned into yarn, is passed through speed frames and ring frames, where final thickness and uniformity are obtained by passing through a series of rollers. So the quality of the yarn depends to a certain extent on the nature and type of rollers through which it passes. The firm, yet cushion-like elastic, smooth, even and hard-wearing surface of these rollers ensures a gentle grip and even control over the fibre to produce a perfect yarn at low cost.

For many years it was believed in the spinning department that roller covers should be made of leather only. The claims of leather for roller covering are now known to every spinner. More recently there has been cork covering which, it is said, is better than leather. Efforts were made in the past to replace leather and cork covers with cots made from synthetic rubber, but tradition dies hard and the refusal to accept the new material continued for a long time. However, after many scientific and practical tests, Messrs. Vulcascot (Great Britain), Ltd., of 1, Lampard House, 8 Maida Avenue, London, W.2, have now put on the market their Vulcascot Roller Cots (V.R.C.) made from synthetic rubber. On account of their special features and enormous advantages, they are reported to have been used by many large spinning mills in England.

The first cost of this V.R.C. may seem higher, but in respect of running and upkeep costs and other features, it is claimed that they are cheaper in the long run than several other types. Each type of roller covering has special claims for special work, but all-round resiliency and flexibility are said to make them more adaptable for spinning trade use.

In the old and common method of leather covering, two different materials, each having different physical characteristics, are used and they require different types of adhesives. The process of roller covering, namely, cutting, measuring, pasting, fixing, etc., requires considerable skill, labour and time, because it is necessary to avoid variation in the natural product of leather skins whereby regularity is impaired. Continuous friction between top and bottom rollers causes rough surface on the leather rollers very soon and hence it is obligatory to grind them, which can be done only once or twice. They also require very often varnishing ; no doubt, varnishing improves and helps the drafting. In spite of all these, grooves are found in the leather rollers in a short time, which affect the yarn very badly and hence requires immediate replacement. This replacement of leather is done at specified intervals, which vary according to rollers for different frames ; roller cloth also has to be replaced at specified intervals. To avoid wastage and maintain efficiency, the length of these intervals should be determined by the actual man on the spot. Further, it is impossible to avoid seams in leather rollers. There are two seams, one for roller cloth and the other for roller skin. The slightest unevenness caused by any or both these joints seriously damages the quality of yarn. Moreover, leather being a natural product, it is not possible to get all the skins of uniform and even thickness except in the case of only the highest quality Persian skins, which are very rare and costly.

In the case of cork cots, as they are made from one piece, there is no seam as in the case of leather; besides, they can be pressed easily on the iron or steel roller. It is also said that they are more resistant to wear than leather and hence more durable. They can be also rebuffed three to four times, depending upon thickness, and hence are said to be cheaper and better than leather. In spite of all these advantages it is said that there are also some serious drawbacks. Firstly, it is a natural product. Secondly, it has not got homogeneous structure but is made up of a multitude of tiny grains which are held together by some type of glue or so. It is said that during mounting, fissures easily occur when expanded and pulled on the iron or steel rollers, such fissures being the reason for frequent thread breakages, a danger which is said to be completely eliminated by V.R.C. It is also said that one other trouble occurs during the working period, that many times one of the grains is dislodged which makes uneven surface, which is sure to affect the quality of the yarn to a great extent. Similar trouble is also said to be experienced during rebuffing.

V.R.C. coverings are said to be easy to mount and inexpensive to maintain. Only two machines, viz., one mounting and one grinding, are required. V.R.C. are made of one piece of synthetic rubber of uniform quality and can be mounted on the iron rollers on the "Dronsfield's Expander," or similar machines. The elasticity of V.R.C. is said to make this procedure easier than a fitting of leather or cork cots. They are easily slipped on the iron roller with a specially prepared rubber solution known as "Vulcascot Adhesive Cement", which gives a firm grip on the rollers and prevents the cots from slipping as the rollers turn round. V.R.C. can be precision-ground to a concentric finish if the wall of the cot has been worn out on the surface. After serving their normal lifetime on the spinning rollers they can be ground, i.e., buffed and used again for a further long period. This period will vary according to the type of work performed, but cases are reported of rollers showing practically insignificant sign of wear even after two years' running. V.R.C. are said to have been in use from five to ten years with no other attention than occasional rebuffing, and if desired, revarnishing.

V.R.C., it is claimed, can be used initially four to five times longer than cork and can also be rebuffed many times. Owing to their incomparably long life, grinding as well as mounting work is greatly reduced. It is also said that saving between V.R.C. and cork is much more than the saving between cork and leather.

The smoothness and uniformity of V.R.C. is said to ensure good spinning results. V.R.C. are claimed to lend the iron rollers the necessary elasticity and to reduce the thread breakages as far as possible. Owing to their high adhesive property thread breakages are further reduced to a minimum ; this ensures quick and uniform running of the spinning frames, the ultimate result being greater tensile strength and more evenness of the yarn, combined with an increased rate of production. Since it is said that V.R.C. gives greater adhesive strength than leather or cork covering, weighting can be reduced by approximately 20 to 40 per cent. Careful attention to this detail can produce a real economy in power consumption. Further, it is said that on account of the reduced weight, the fibres are not so compressed and the yarns manufactured by means of V.R.C. are considered round, soft and more pliable.

Every spinner has experience of rollers becoming permanently bad as a result of oil damage. It is said that V.R.C. are not affected by oil at all. This resistance to oil is claimed by the fact that there is absolutely no effect even though V.R.C. are immersed in lubricating oil even for a fortnight.

Susceptibility to atmospheric variation is also a disadvantage, but V.R.C. rollers are believed to be unaffected by it and do not get brittle. It is said that there is no wrapping round or sticking of the yarn by which there is less clearer waste. Further, they are seamless and there are, therefore, fewer yarn breakages. Moreover, the natural colour, viz. black, of V.R.C. does not cause discolouring of the thread but is advantageous as the spinner can see the running of the thread more easily from a distance.

The coefficient of friction of V.R.C. is extremely high, and this grip ensures uniform drafting. Control over fibre is more even because the rollers do not vary by more than one-thousandth of an inch even after two years of steady running. The fact that certain methods of roller covering either require early rebuffing or recovering is a proof that they have run "hollow" and become grooved, in some cases it is said by as much as fifteen-thousandths of an inch in a very short period which is bound to result in unsatisfactory fibre control and bad spinning, freedom from which is a very great advantage.

V.R.C. are highly resilient, producing a perfect cushioning effect, and they are regular in their structure. Being a man-made synthetic product, they can be adapted, it is said, to every individual requirement as to degree of resilience. This means that each type of yarn dealt with can be provided with rollers of the most suitable composition, specially in regard to their hardness, and actual tests in particular mills can be made to find out the proper compositions most suitable to their requirements.

V.R.C. form one homogeneous body on the foundation of the metal roller, which results in one wide rubber cushion running on to the fluted roller the whole of its length. Because V.R.C. can be varied over a wide range of substance for varying uses, so can the cushion effect be varied to get any desired result in smooth running and better spinning. This is seen in the difference of drawing untwisted sliver at the drawing frames and the final twisted roving from the speed frames. In the early processes at the Drawing and Slubbing Frames there is a tremendous volume of fibres to be controlled all the time, and due to homogeneous character, freedom from "Hollows and Bumps," V.R.C. are said to provide a valuable aid to the spinner.

Research on this matter of fibre bulk has further proved that even in the presence of different types of cotton fibre in the same mixing, with hair weights per centimetre from the lightest to the heaviest, V.R.C. select and control the different fibres, resulting in a better and stronger yarn. This problem is analogous to high draft spinning.

The part played by the front, middle and back top rollers of speed and ring frames is also very important. The continuous extra demand for very coarse, fine and special yarns required for war effort, besides increasing civil requirements and shortage and irregular supplies of raw materials, stores and machinery has seriously affected the back process of so many textile mills. As a result, special attention is now paid to the function played by front, middle and back top rollers and their effects on spinning from all standpoints.

Before covering or re-covering a roller, due consideration should be given to its relation and real function of drafting. Top metal rollers having a smooth surface are the real origin of constant trouble, though it is not an infrequent occurrence for the fibre to slip which is absolutely undesirable in the present high speed and high draft spinning machinery. The tendency to go on higher and higher drafts and to increase the production together with the reduction in back feeding machinery, wages, etc., calls for the strictest supervision of the type of covering required for covering front and even middle as well as back top rollers.

A new and successful method is believed to be exemplified by the V.R.C. The middle top rollers and, in special cases, even the back top rollers of ring spinning frames (over and above the usual practice in drawing and speed frames), may be covered, by V.R.C. which is said to make considerable improvement in drafting, resulting in better grip and better fibre control. Further, due to this, it is considered possible to increase the draft by 20 per cent. even on the existing old drafting arrangement, without affecting the quality of yarn. Alternatively, more strength and more regularity are said to be obtained in the yarn, if no increase of draft is desired or contemplated. This is said to be successful in both coarse as well as fine spinning.

Further, it is said that V.R.C. are also used in woollen spinning mills in England and that they can as well be used in jute and hemp industries.

OUR PERSONAL COLUMN

Sir Joseph Kay, Kt., Managing Director of W. H. Brady & Co., Ltd., recently returned to Bombay after a stay of nearly eight months in England.

Rao Bahadur K. Sanjiva Rao, L.T.M., A.T.I. (Manc.), who retired last year as textile expert to the Government of Bihar after twenty-two years' service in that province, has recently been appointed Director of Industries and Commerce, Jaipur State.

Mr. E. W. Perry, I.C.S., has been appointed Development Commissioner to be in charge of the post-war schemes of the Government of Bombay. He is coming over from the Government of India, where he had been serving since his relinquishment of the office of the Prime Minister of Kolhapur State.

Mr. P. C. Chaudhuri, Deputy Chief Controller of Imports, Bombay, has been appointed as Joint Chief Controller of Imports, New Delhi. It is likely that Mr. S. N. Mehta, Deputy Controller-General of Civil Supplies, will succeed Mr. Chaudhuri as Deputy Chief Controller of Imports, Bombay.

Mr. J. B. Greaves, C.B.E., M.L.A., J.P., Honorary Chief Controller of Raw Materials and Stores, Government of India, Bombay, has been appointed Sheriff of Bombay in succession to the Hon'ble Sir Shantidas Askuran. He was sworn in at the Bombay Secretariat on 14th December 1944.

Mr. Greaves is a member of the Bombay Legislative Assembly, a Justice of the Peace and an Honorary Magistrate. He is the Chairman of the Board of Directors of Messrs. Greaves Cotton & Co., Ltd., and was awarded the C.B.E. in 1941. He represented the Bombay Chamber of Commerce in the Provincial Legislative Council for a time, prior to his election to the Provincial Assembly. It will be interesting to recall that his father, the late Mr. Herbert Greaves, was Sheriff of Bombay in 1913 and it is doubtful if there is any other European family in Bombay who can claim a record of this kind. As Chief Controller of Raw Materials and Stores under the Textile Commissioner to the Government of India, a post where he serves in a purely honorary capacity, Mr. Greaves has done very useful work for the textile industry of this country.

Mr. Ismail M. Mansuri, B.A., proprietor of the Graduate Picker Works, Ahmedabad, has been appointed a member of the Leather Research Committee constituted by the Council of Scientific and Industrial Research, New Delhi. He received training in picker-manufacture from his father, Mr. Mahomed G. Mansuri, B.A., and places his technical knowledge of picker manufacture at the service of millowners in India who may desire to consult him.

Mr. Gerald K. Hall of Messrs. Robert Hall and Sons (Bury), Ltd., loom makers, has been elected Chairman of the Lancashire Chambers of Commerce Committee, in succession to Mr. Harold Parkinson, of Burnley.

Textile Machinery Export Group in England.—The following are members of the Executive Committee of the Textile Machinery and Accessories Industrial and Export Group:—Chairman, Mr. G. H. A. Sington (Platt Brothers & Co., Ltd.); Messrs. J. K. Anderson (Fairbairn Lawson, Combe Barbour, Ltd.); J. T. Gailly (James Mackie and Sons, Ltd.); Sir William Prince-Smith, Bt., O.B.E.

(Prince-Smith and Stells, Ltd.); A Livesey (Henry Livesey, Ltd.); D. Dickinson (Butterworth and Dickinson, Ltd.); R. C. Mather (Mather and Platt, Ltd.); R. Liddell (John Hawthorn & Co., Ltd.); T. S. Grieve (T. Grieve & Co., Ltd.); E. Wildt (Wildt & Co., Ltd.); H. D. Norris (Samuel Law and Sons); and F. J. Grimmer (Wilson Brothers, Bobbin Co., Ltd.).

Dr. John Eric Richardson, Principal of the Oldham Technical College, has been appointed Principal of the Salford Royal Technical College, in succession to Mr. J. C. Jones, who has been appointed Director of Education to the London Polytechnic.

Dr. Richardson was appointed to Oldham at the end of 1941 and took up the position in 1942. He is 39 years of age and went to Oldham from Hull Technical College, where he had been eight years, four as Lecturer in Electrical Engineering and four as Head of the Engineering Department. Previously he was on the staff of the Birkenhead Technical College. He graduated in engineering with first-class honours at Liverpool University at the age of 23, and took his Ph.D. degree.

Dr. Richardson has often admitted that when he went to Oldham he knew little or nothing of the cotton trade, but since then he has studied it and visited many mills. He has reorganized the Technical College and has particularly been anxious to try and revive interest among students for cotton spinning, having succeeded in getting day-time students in these subjects to be sent by firms during normal working hours.

Lord Derby, K.G., has recently resigned from the office of President of the Administrative Council of the Empire Cotton Growing Corporation, London, England.

At a recent meeting of the Executive Committee of the Corporation a letter was read in which Lord Derby explained that he felt obliged to ask the Corporasion to accept his resignation of the presidency of its Administrative Council. He intended to continue to take the same interest as heretofore in the work that the Corporation was carrying out, but he regretted that he was no longer able to participate actively in it. The Committee accepted his Lordship's resignation with very deep regret, and they recorded their great indebtedness to him for the invaluable assistance he had given to the Corporation as President of the Council since its incorporation in 1921. It was further decided to invite Lord Derby to become Patron of the Corporation, a suggestion to which he has gladly acceded.

Obituary

Mr. G. Arthur Schieren.

Information has just been received by cable of the death of Mr. G. Arthur Schieren, President of Messrs. Chas. A Schieren Company of 30–38, Ferry Street, New York, U.S.A., well-known tanners and manufacturers of superior leather belting, etc., on the 7th instant.

Rao Saheb B. V. Deshmukh, Managing Director of the Vidarba Mills, Ellichpur, Berar, was one of the passengers involved in a serious bus accident on the Amraoti-Ellichpur Road on 27th November and was killed instantaneously. Mr. Deshmukh was a member of the Provincial Legislative Council and was also a member of Indian Central Cotton Committee.

Credit Facilities for Textile Labour

Progress of Co-operative Societies in Bombay Mills

CENTURY MILLS EMPLOYEES' CO-OPERATIVE CREDIT SOCIETY, LTD., BOMBAY

Ninth Annual Report, 1943-44

THE year opened with 777 members. During the year 225 new members were enrolled and 55 members withdrew. Present strength is 947.

Share Capital

Share and subscription amount in the beginning was Rs. 42,171-11. The collection during the year was Rs. 9,739 and the refund was Rs. 2,757-9. The capital at present is Rs. 49,153-2, of which Rs. 46,925 constitutes the share capital.

Loans

Two hundred and fifty-five loans worth Rs. 28,880 were given to the members during the course of the year. The following is the classification of these loans with the purpose for which they were granted.

No. of Loans	*Purpose*	*Amount.* Rs.
4	To dig well	485
8	Redemption of mortgaged land	950
10	Purchase of land . .	1,405
5	Purchase of bullocks . .	455
1	Litigation	45
67	Building repairs and construction	7,485
73	Marriage.	9,015
32	Household	2,525
52	Old debt redemption . .	6,350
3	Ceremonials	165
255	Total Rs.	28,880

Fourteen cases of old debts were settled by the welfare officer and Rs. 382-1 were saved to them.

Profit

The net profit at the end of the year was Rs. 1,941-8-2 which together with Rs. 5-11-8 brought forward from last year makes Rs. 1,947-3-10, which is recommended by the Managing Committee to be appropriated as follows:—To reserve fund at 25 per cent. of the net profit as per society's bye-laws Rs. 485-6; to distribution of dividend at As. 2½ per each paid up share Rs. 1,419-11; bonuses Rs. 31-14-8; and balance carried forward Rs. 10-4-2.

SASSON AND ALLIANCE SILK MILL EMPLOYEES' CO-OPERATIVE CREDIT SOCIETY, LTD., BOMBAY

Fourth Annual Report, 1943-44

The year opened with 181 members. During the year 31 new members were admitted bringing the total to 202. At the end of the year there were 196 members.

Share Subscriptions

During the year Rs. 8,000 was collected by way of monthly subscriptions; and Rs. 971 was refunded. The balance at the close of the year stood at Rs. 20,204-9-9.

Long and Short Term Loans

During the year long-term loans amounting to Rs. 10,035 were paid. Short-term loans amounting to Rs. 210 were paid.

Reserve Fund

The reserve fund stands at Rs. 760-15. If this year's proposed amount of Rs. 144 is added to it, the reserve fund will amount to Rs. 904-15.

Saving Account

In order to give every sort of facility to the members, they have opened a saving account in order to enable them to deposit their savings and they allow 2 per cent. interest on such deposits up to a maximum of Rs. 1,000. At present they have eight accounts with Rs. 390 to their credit.

Distribution of Profit

Net profit for the year after deducting the expenses amounts to Rs. 576-0-3.

The committee proposed that out of this the following appropriations be made:—25 per cent. of the net profit to the reserve fund Rs. 144; honorarium to auditors Rs. 50; and bonus to staff Rs. 22.

The committee proposed paying a

dividend of 2½ per cent. on the paid-up share subscriptions.

THE DAWN MILLS EMPLOYEES' CO-OPERATIVE CREDIT SOCIETY, LTD., BOMBAY

Tenth Annual Report, 1943-44

At the commencement of the year the membership was 1,221. The number of new admissions was 96, and withdrawals 53. Thus the year ended with a strength of 1,264 on the rolls.

Share Capital

The total amount of share capital at the commencement of the year was Rs. 67,823-11. During the period the society has collected Rs. 17,607-5. A sum of Rs. 2,756-8 was refunded to members, who ceased from the society. Thus the balance at the close stood at Rs. 82,674-8.

Deposits

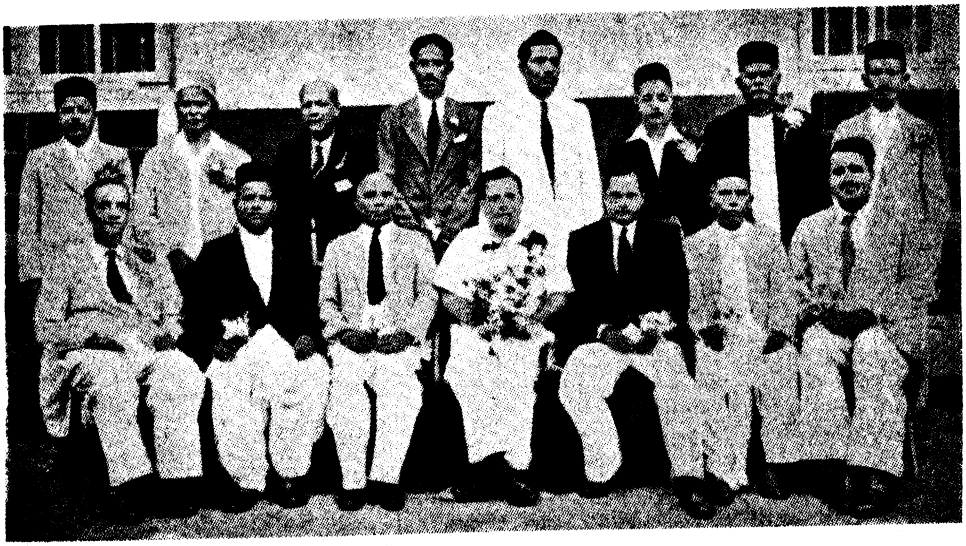
The deposit amount at the credit of the members at the beginning was Rs. 18,172-2-9. Rs. 18,317-4-6 were collected during the period, and Rs. 11,615-13 were refunded. The balance at the close of the year stood at Rs. 24,873-10-3.

Loans

The amount of loans granted to members during the period was Rs. 1,62,415. The classifications of these loans with their purposes are as under:—Repayment or debts Rs. 50,980; marriage and religious ceremonies Rs. 30,890; Land purchasing Rs. 29,300; cattle purchasing Rs. 3,500; agricultural operations Rs. 20,500; and miscellaneous purposes Rs. 27,245. Total Rs. 1,62,415.

Profit

The transactions of the society have resulted in a gross profit of Rs. 5,582-12-6. After deducting the following items, as per provision under bye-laws No. 49/A and 49/B. :—Interest on deposit Rs. 428-13 and Working expenses Rs. 860, and with Rs. 2-10-4 brought over from last year's account, the society has a profit of Rs. 4,296-9-10 available for distribution, and the committee recommends the following distribution be made thereof:—Reserve fund at 25 per cent. Rs. 1,073-8; dividend at 4 per cent. Rs. 2,968-11; dividend equalization fund Rs. 50; Investment depreciation fund Rs. 150; charity Rs. 30; textile technical school Rs. 20; and carried over Rs. 4-6-10.



Group Photo of the Managing Committee of the Dawn Mills Employees' Co-operative Credit Society Ltd., Bombay.

Sitting from left to right:—Messrs. A. S. Benjamin, Storekeeper; G. K. Rane, Timekeeper; B. Fernandez, Assistant Manager; H. Hargreaves, Manager; C. Fernandez, Spinning Master; N. R. Korgaonkar, Head Clerk; D. D. Mistry, Labour Officer.

REVIEWS

Substitutes. By H. Bennett. Published by Chemical Publishing Co., Inc., Brooklyn, N.Y., U.S.A. 1943. Price $4.

This is a useful handbook of substitutes and alternatives for chemicals, metals, fibres and other commercial products, including a plan for choosing proper substitutes. Substitutes have sometimes been used to reduce costs, sometimes to replace unobtainable materials and sometimes to produce better or different properties. Since no material has all the identical properties of the material which it is intended to replace, selecting a proper substitute must always be a task of considerable difficulty. A replacement that will produce a finished product which will perform almost the same function as the original is, therefore, considered ordinarily satisfactory. Further, because of the uncertainty of the continued availability of any substitute material it is desirable to try out a number of materials in each problem, so as to have a substitute for the substitute used. Although this may mean additional work, it is worthwhile for ensuring continuity in business. The book under review embodies in convenient form the result of years of experience of several chemists, engineers and technical workers and is bound to be of great assistance to the industrialist as well as the research worker in the laboratory.

The Indian Textile and Engineering Diary, 1944. Published by John Worrall Ltd., Oldham, England. (Indian Agents : W. H. Brady & Co., Ltd., Churchgate Street, Bombay.)

This well-known annual publication about the textile industry is compiled as a medium to develop and further mutual trade relationships between the makers and merchants of textile machinery, accessories and the textile and allied firms in India to whom it is distributed *gratis* ; it is now in its 55th annual edition. Due to the reduction in the size of the publication, the entries regarding Indian mills have been made in a form different from those in previous years. The paper situation in England has necessitated a reduction in the size of the Diary and the tabular form of type-setting has had to be given up. But opportunity has been taken to include additional information in the particulars relative to each mill, which have been augmented by details of the type of yarns and fabrics manufactured, cloth widths, selling agents, retail depots, etc.

The war, it is well to point out, has not hindered research and technical progress in the British textile engineering and other allied trades, and the accumulated benefits of several years of experimentation and invention may be trusted to have very marked effect on all phases of spinning, weaving and processing. In the advertisers' announcements in this Diary is available a wide choice of machinery, accessories and mill supplies, justifying its claim to be an authoritative catalogue for all mill requirements, in addition to its general value as a diary and complete directory of the Indian textile industry.

Yarn and Other Calculations for Cotton Students. By N. G. Devadhar, L.T.M., Bhide Colony, Sholapur. Price: Rs. 2-8.

The book under review should be a great help to students in cotton textile schools and to mill apprentices who are called upon to work out several calculations every day. Calculations are restricted principally to counts of yarn, and those dealing with mechanical details have been omitted in order to ensure the appearance of a compact little volume. Exercises and examples, supplemented by an appendix giving the count equivalents of other than cotton yarns to cotton yarns, adds to the value of the book.

Federation and Labour Legislation in India. By Sir Atul C. Chatterjee, G.C.I.E., K.C.S.I. Reprinted from *International Labour Review*, April-May 1944. Price: 6*d*.

Sir Atul C. Chatterjee, who was one of the delegates of the Government of India to the First Session of the International Labour Conference, held at Washington in 1919, was for some twenty years thereafter closely associated with many of the activities of the International Labour Organization and represented the Government of India at a number of meetings of the Governing Body of the International Labour Office and sessions of the International Labour Conference. In 1927 he was elected by the Conference as its President, and in 1933 by the Governing Body as its Chairman. In this latter capacity he led a delegation of the Governing Body to the World Economic Conference in London. Sir Atul, who has served in the Indian Civil Service and has had considerable administrative experience in

India, was for a time Member in charge of labour questions of the Viceroy's Executive Council and was responsible for dealing with a number of measures in the Indian Legislature which came before it as a result of the consideration given by the Government to the decisions of the Washington Conference.

The subject discussed by Sir Atul in the booklet under notice is of great topical interest, as important labour measures are now under consideration in the country. In the post-war years, labour problems are likely to loom even larger, and it is thus necessary to begin the study of labour's place in whatever constitution may be devised for the country. Sir Atul's weighty and scholarly discussion of the subject will, therefore, be welcomed as well by India's constitution-makers as by students of Indian labour problems.

NOTICES

Report on Staple Length of Indian Cotton Crop of 1943-44 Season. Published by the Indian Central Cotton Committee, Bombay. Price: Re. 0-4-0.

The following rough distribution into staple length groups of the official figures of production for the current and the previous seasons is shown:—

(Thousand bales of 400 lbs. each.)

Staple length group	Government Forecasts	
	1943-44	1942-43
Long staple, over 1"	363	270
Medium staple, A1"	291	319
Medium staple, B, ⅞" to 31/32"	2,506	2,146
Short staple, A, 11/16" to 27/32"	777	730
Short staple, B, 9/16" to 21/32"	502	468
Short staple, C, 17/32" and below	655	621
Total ..	5,094	4,554*

*This has been revised to 4,702,000 bales in the April 1944 forecast.

It will be seen that the production of staple length ⅞" and above during 1943-44 formed 62 per cent. of the total against 60 per cent. in the previous season.

J. K. Review, Vol. 5, No. 2, includes an interesting article on some problems of social security by Mr. S. K. Pramanik, Vice-President of the All-India Trade Union Congress.

G. E. C. Osram Bulletin July 1944 (published by the General Electric Co., Ltd., Magnet House, Kingsway, London). The issue under notice includes highly informative articles on the science and art of lighting and on infra-red lamp heating in industry.

Studies on Foliar Hydration in the Cotton Plant. By E. Phillis and T. G. Mason. Price 2*s.* 6*d.* **Studies on the Partition of the Mineral Elements in the Cotton Plant.** By T. G. Mason and E. Phillis. Published by the Empire Cotton Growing Corporation, 37, Inner Park Road, Wimbledon Common, London. Price 2*s.* 6*d.* These bulletins describe the result of the experiments carried out at the cotton research station of the Association at Trinidad.

Improved Single Process Lap Making is the title of a new illustrated booklet issued by the well-known textile machinery makers, Platt Bros. & Co., Ltd., Oldham, England. It describes a single process from bale-opening to lap forming entirely automatic in operation. In this system cotton is carried from one unit to another by means of air currents, and allows the extraction of large quantities of the finer dust. The evenness of the supply of cotton is ensured by the instantaneous and unerring action of electricity.

The difficulties of producing perfect laps are believed to be greater to-day than ever before. Among the important factors responsible for these difficulties are the extended use of high density baling, the greater variety of grades owing to the extension of cotton-growing areas, the higher percentage of deleterious matter (particularly in cotton arrivals from the newer fields), a persistent demand for the diminution of dust in cotton mills generally and a demand for less damage to the cotton and for more perfect opening and cleaning, to ensure a more efficient functioning of the card. The latest single process system of lap-making so well described in the booklet under notice is believed to have the advantage of requiring less machinery for a given output, of requiring less labour, and producing superior quality.

The Indian Agents of Platt Bros. are Indian Textile Engineers, Ltd., 143, Medows Street, Fort, Bombay.

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Internal Lines of Communication

(*Concluded from page* 170)

issue of fifteen during the month, and only about twenty-five pieces remaining, it would be advisable to order a few more pieces of that particular item.

It must be remembered that the above system is only intended as a guide and, of course, the officer must be guided by his own requirements and experience. At any rate, the system acts as a reminder as well as acquainting him with his real position. It does not take more than fifteen minutes to examine the complete ledger of the stores of a big department, and it must be admitted that it is time well spent.

It is possible to proceed indefinitely with elaborations of this system and even to invent new ones. I feel, however, that enough has been said to give the reader a fair idea of how a modern stores can be run without causing unnecessary fraying of tempers.

Warning to Textile Trade

"Put Your House in Order Before 31st January"

Textile Commissioner's Speech at Bombay Rotary Club

THE shock as a result of the action taken by the Government of India during the months of April and May by assuming the control over two mills and controlling the distribution of production of 12 others, as also the drastic action taken by the Provincial Governments has now begun to wear off, and during the last two months and over black marketing in cloth and yarn has been steadily on the increase and assumed proportions when something drastic has got to be done, said Mr. M. K. Vellodi, Textile Commissioner to the Government of India, in a speech before the Rotary Club of Bombay on 5th December 1944.

He added: "To my mind there are only two methods in which this problem can be tackled. One is for the Government to acquire physical possession of every yard of cloth and every pound of yarn that is being produced by the textile mills in this country and ration these quantities to the consumer. The other is to allow the distribution of these goods through the ordinary channels of trade, subject to such safeguards as the ingenuity of the Textile Control Board and the Government could devise. It has been asked why, if Provincial and State Governments can acquire physical possession of foodstuffs and distribute these on a rationed basis throughout the country, a similar procedure cannot be adopted in respect of cloth and yarn whose production is confined to a few hundred mills in the country.

Why Not Ration Cloth ?

"I do not say this is impossible, but unless production is rationalized and the varieties of cloth are reduced to manageable proportions, it would be unwise to undertake it. For the present and during the last year and a half the Government of India have been following the policy of leaving cloth and yarn to reach the consumer through the ordinary channels of trade. That this policy has not wholly succeeded is clear and it was only the other day that Sir Akbar Hydari at a meeting of the dealers in the Mulji Jetha Market in Bombay announced in very clear and unambiguous language that if before the 31st of January 1945 the dealers did not put their houses in order and substantially reduce the black marketing, the Government of India with the help of the industry and of the public of this country would unhesitatingly take the necessary steps to ensure that cloth and yarn do reach the consumer at reasonable prices and in reasonable quantities. I will only add that those words were not intended as an idle threat."

Mr. Vellodi traced the history of textile control and the position of cloth and yarn supply in this country immediately before and after the declaration of war.

He said: "**Our annual production of cloth in the textile mills before the war used to be roughly 3,500 million yards, handlooms produced on an average about 1,600 million yards of cloth, and we used to import about 800 to 900 million yards. Our pre-war export of cloth was small and never exceeded 100 to 150 million yards, so that on a rough computation we had about 6,000 million yards of cloth for distribution in the country. The position to-day is roughly that the textile mills in this country produce about 4,800 million yards of cloth per annum, handlooms account for nearly 2,000 million yards while there are no imports. Out of this production about 800 to 900 million yards are supplied to the defence forces and about 600 million yards are exported. The quantity of cloth available for consumption, therefore, is only about 5,300 million yards, a quantity extremely inadequate for the purpose of clothing the millions of this country.**"

No Increase in Profit Margins

It has been argued by the dealers and their representatives that the margins of profit allowed by the Textile Control Order are not adequate and that a slight increase in these margins would put things right. Under the Control Order cloth is to be sold in retail at a price not exceeding 20 per cent. over its ex-factory price. Out of this 20 per cent. it has been legislated that the retailer who sells the goods to the consumer shall receive 10 per cent. the other 10 per cent. being divided among the various stages of wholesale trade. On behalf of the dealers it has been suggested that an addition of 2 to 2½ per cent. to this margin would almost entirely eradicate the black market. This point might have been worth pursuing if all that the consumer has to pay to-day for his cloth were another 2 per cent. over controlled prices, but when the consumer cannot get cloth except by paying prices ranging from 20 to 60 per cent. over controlled prices the suggestion that an addition of 2 per cent. to the margin of profit would cure the evil appears ridiculous. The fact of the matter is that war profits have blinded the trade to their very serious responsibilities and the duty that they owe to the public of this country. The unavailability of cloth except at extremely high prices is particularly true of the finer varieties of cloth and here it is necessary to emphasize that only 6 per cent. of the yarn spun in this country by mills can be regarded as fine, and that very large quantities of fine yarn which we used to import from Japan and the U.K. are not now received in this country. Out of the fine yarns spun, quite a large percentage is used up in the manufacture of cloth borders and for making such cloth as poplins, so that the available quantity of what may be called fine cloth such as mulls and voiles is hardly adequate to meet the needs of even a small fraction of the public. On the other hand, there has been a substantial increase in the income of the average individual in this country and persons who never aspired to buy fine cloth before the war have been given the means to buy it, even at the inflated prices of such cloth to-day. The position thus is that persons living in Bombay City, for example, who are perfectly satisfied and are in fact glad to get rice of the second sort which Providence and the Supply Commissioner in their infinite mercy give to them, must have for wearing purposes the finest *dhotis* and *saris* that the textile mills in this country could produce. Apart from the various ways in which cloth tends to go underground one fruitful source of scarcity is thus the increased demands from the public and its apparently incorrigible habit of buying without any thought of one's neighbour. If every member of the public and particularly those of the upper ten would resist the temptation of buying cloth unless it was absolutely essential, part at least of the present constricted position would be resolved. To this I would add that the public should also refuse to pay prices which are higher than the controlled prices when making their purchases, as every time they do not do so, they are very actively assisting the black marketeer.

No Substantial Increase in Production Possible

Referring to the criticism that neither the Textile Control Board nor the Government of India have taken steps to increase the production of the textile mills in the country, Mr. Vellodi admitted that it was not entirely unjustified. He, however, stated that certain members of the Industry's Committee of the Textile Control Board have for some time been anxiously examining this problem in all its aspects. There are certain obvious obstacles in the way of further production on existing lines, the most important of which being the lack of an adequate supply of coal. It has been reckoned that the textile industry taken as a whole requires a supply of roughly 180,000 tons of coal per mensem for its satisfactory running, whereas the supply has never exceeded on an average more than 150,000 tons. There are other obstacles such as the fact that in order to satisfy the requirements of defence forces, many of the textile mills in this country have been obliged to go coarse as the saying goes, thus vitally affecting the overall production of cloth. There are other hindrances such as an inadequate supply of mill stores, so that it seems that in the existing circumstances no substantial increase of production can be achieved except by rationalization and standardization.

Standard Cloth

Referring to standard cloth, Mr. Vellodi said that during a period of 18 months the Government of India have placed orders for the manufacture of over 1,000 million yards of standard cloth of a total value of Rs. 48 crores out of which 865 million yards had actually been delivered to the Provinces and States. A very large percentage of this quantity had reached the consumer and, what is very important to remember, at controlled prices. That the distribution of standard cloth among the poorer classes of the people has filled and is continuing to fill a real need is the unanimous opinion of all the Provincial Governments and States that have taken part in the scheme.

Concluding, Mr. Vellodi said: "I believe textile control and its ancillary measures have very largely contributed to the arrest of the inflationary trend in prices generally in this country and with the co-operation of the public it can, to a large extent, achieve its ultimate object, viz., in making available to the majority of the public of this country cloth at controlled prices. The question has been asked, 'How long is this control likely to last?" It is not an easy question to answer but the indications show that some form of controlled economy is bound to continue as an integral part of the economic life of the country for a fairly long period after the war, if not for ever. I regard textile control as one of the most important of such controls and its continuance certainly for a good many years after the war, is, in my opinion, essential from the point of view of the public of this country."

Establishment of Handloom Board

The Textile Control Board discussed at its latest meeting in Bombay the constitution of the Handloom Board proposed to be set up by the Government of India, in the light of the views expressed by the provincial Governments, the millowners' associations and other interested bodies. It is understood that the meeting decided to recommend to the Government of India to constitute the Handloom Board. The meeting was presided over by Mr. Krishnaraj M. D. Thackersey and was attended, among others, by Sir Akbar Hydari, Secretary, Department of Industries and Civil Supplies, and Mr. H. M. Patel, Joint Secretary.

The proposal for setting up the Handloom Board was recommended by the Fact Finding Committee of the Government of India. The Board is expected to assist the handloom weavers in getting dyes, chemicals and stores at fair prices, undertake research in respect of the marketing of handloom products and make available to the handloom weavers much-needed yarn. The Textile Control Board entrusted the question of yarn supply to its Yarn Sub-Committee.

The tentative constitution of the Board provides that there will be 25 members, 15 representing the provincial Governments and the handloom weavers, four representing the Indian States and six to be nominated by the Textile Control Board to represent the millowners and the yarn merchants. The final decision in regard to the constitution of the Board will be taken by the Government of India.

Sir Akbar Hydari at Ahmedabad

Sir Akbar Hydari, Secretary, Department of Industries and Civil Supplies, Government of India, and Lady Hydari, arrived in Ahmedabad on 27th November 1944.

Sir Akbar visited a couple of mills and was entertained at a tea party by local dyers and printing associations. Sir Mahbub and Lady Kadri gave a luncheon in their honour at the Nowroji Hall.

At a Press Conference a representation signed by the editors of four local newspapers was submitted to Sir Akbar and discussed. The representation stated that despite the Government's efforts to control the prices of cloth and make it available to all, the desired results had not been achieved. It was further stated that the textile industry and trade interests had been mainly represented on the boards and committees appointed by the Government and popular interests were not represented. The figures of the cost of production supplied to the Government were very high, and in fixing the price of cloth, the Government had allowed too much profit to the mill industry. This fact was evident from the huge profits of the textile mills, as shown in their balance sheets.

It was further stated that black market was rampant in the city and that the consumer was forced to pay in the black market prices which were 50 per cent. on an average above control prices. The representation suggested that something drastic should be done to avoid the unfair margin taken by middle men and recommended that there should be a drastic cut on cloth exported to foreign countries.

Sir Akbar said that cloth was necessary next to food, and continued: " We have to see that the mills make cloth. Even the less efficient mill is set to work for the production of cloth. There are black sheep everwhere. Black market prevails in the finer counts, rather than in the coarser counts. Efforts are being made to remove black market; schemes have been evolved and are being tried to remove black marketing."

Sir Akbar said that if the middle man did not play fair then he would be wiped off. He was of the opinion that at present very few mills were making profits over 7½ per cent. and hardly a single mill about 20 per cent. on the cost of production. He declared that the standard cloth scheme was successful as far as it was expected to be, and " we propose to maintain it." He was of the opinion that the present exports could not be reduced but gave an assurance that they would not increase.

Sir Akbar also visited the Maskati Market Association.

Provincial Textile Controllers in Conference

Regular and frequent announcements* have recently been made by the Textile Commissioner in the Press, warning dealers to dispose of by 31st December 1944, those goods which will become time-barred by that date. At a conference of Provincial Textile Controllers in Bombay on 13th and 14th December, concerted measures were agreed upon to seize all such cloth illegally held on and after 1st January 1945, and every month thereafter, as goods texmarked January 1944 and later become time-barred.

Recommendations regarding the adjustments of profit margins of 20 per cent. between various dealers, yarn distribution and the control of handloom cloth were among the other questions discussed at the conference.

The Textile Commissioner desired to inform all concerned that the Bombay Cloth Distribution Panel would not issue, with immediate effect any more permits for the despatch of goods to the South Bengal and the Rajputana deficit zones during the month of December.

The difficulties experienced by retail cloth dealers in Bombay were placed before Pressmen by Mr. Jayanand N. Khira, President of the Federation of the Bombay Retail Cloth Dealers' Association, at a luncheon meeting arranged by the Committee of the Association to discuss the cloth control. He complained that the margin of profit fixed by Government was mostly eaten away by the millowners and the wholesalers, leaving the retail trade practically nothing.

Mr. Khira produced a number of cloth pieces to show that the stamping of prices was not done in conformity with the Government notification and stated that even the Provincial Textile Controller was not able to ensure a steady flow of goods to the 300 shops approved by him. He suggested that the interests associated with the distribution should be classified clearly, a rigorous check should be kept on the stamping of prices on the piecegoods, the margin of profit allowed to the manufacturers should be defined, and that his association should have a voice in the Textile Control Board.

Wider Powers Given to Commissioner

With a view to securing proper distribution of cloth and yarn, the Cotton Cloth and Yarn (Control) Order, 1943, has been so amended as to vest in the Textile Commissioner to the Government of India very wide and extensive powers of direction to manufacturers and dealers in regard to the distribution of cloth and yarn including powers to fix the dealer's margin of profit, says a Press Note issued by the Textile Commissioner.

In pursuance of this amendment, the Textile Commissioner has issued an order dated 16th December 1944, directing that no quota holder carrying on business in the city of Bombay or in the Bombay Suburban District shall sell or deliver any cloth purchased by him directly from a manufacturer or open any such bale of cloth except in accordance with the permission or direction issued by the Textile Commissioner.

This order comes into effect immediately and applies both to existing stocks of cloth and also to future deliveries from mills; in this connection quota holders are warned that failure by them to take deliveries of cloth from the mills will result in the forfeiture of all their quotas in the future.

Despatch of Cloth from Bombay : Procedure Outlined

With a view to remove any misunderstanding that may exist among the dealers about the present procedure regarding the despatches of cloth from the city of Bombay to destinations within or without the Bombay Surplus Area, the Textile Commissioner desires to make it clear that no permits are necessary for despatch of goods from one destination to another within the Bombay Surplus Area. Licensed cloth dealers and commission agents whose place of business is in Bombay city can alone obtain a permit for despatch of goods from the Bombay Surplus Area to destinations outside that area. Up-country dealers holding licences valid in their own Province or State or holding licences issued by the Government of Bombay but having their place of business outside the Bombay city limits, can make purchases in the Bombay market, but they will have to arrange for despatches to places outside the Bombay Surplus Area through dealers or commission agents who hold Government of Bombay dealers' licences and having their place of business within the city limits.

Government-Controlled Mills: How Their Production has been Distributed

About 100 million yards of cloth manufactured by the eleven mills in the Province of Bombay whose production is distributed under the direction of the Textile Commissioner to the Government of India have been allotted direct to different provinces during the six months ending October 1944. In terms of bales this is 65,782 bales. Out

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*See the *Indian Textile Journal*, November 1944, page 119.

of this 56,436 bales have already been despatched to 10 provinces, 3 States and a Commissioner's province. The remaining 9,346 bales have already been registered for despatch and will move at an early date.

Despatch of Cloth and Yarn by Post

An amendment to the Cotton Cloth and Yarn (Transmission by Post) Prohibition Order, 1944, published in the *Gazette of India* of 18th November permits anyone wishing to do so, to send by post cloth and yarn to the following:—

1. The Textile Commissioner, Bombay.
2. Indian Central Cotton Committee's Technological Laboratory, Bombay.
3. Chief Inspector of Cotton Textiles, Bombay.
4. Controllers of Inspection, Bombay, Madras, Calcutta and Lahore and officers subordinate to them.
5. General Headquarters, New Delhi.
6. Chief Inspector of Stores and Clothing, Cawnpore.

An order of the Textile Commissioner published in the *Gazette of India* of the same date enables the cotton textile mills to despatch by post samples of standard cloth, when declared as such, to any provincial or State officer in India.

Cloth Transport By Sea

The Government of India have agreed to cover marine war risk insurance on cotton piecegoods and yarn transported by sea from Bombay to Calcutta for a further period of one month from 1st December, says a Press Note issued by the Textile Commissioner.

By a notification in the *Gazette of India* dated 18th November 1944, the Government of India have decided to exempt woollen cloth containing 40 per cent. or less of cotton by weight from the purview of the Cotton Cloth and Yarn (Control) Order, 1943. Such cloth will, however, be governed by the provisions of the Hoarding and Profiteering (Prevention) Ordinance. All woollen cloth containing more than 40 per cent. of cotton by weight will come within the purview of the Cotton Cloth and Yarn (Control) Order, 1943.

NON-CONTROLLED WOOLLEN GOODS

Maximum Retail Prices

The Central Government have fixed the maximum retail prices which may be charged by dealers in respect of Indian woollen goods other than controlled goods. The prices fixed are for the best quality material, and prices for lower qualities should be proportionately less. The maximum retail price of tweeds and woollen suiting manufactured from Indian machine-spun woollen yarns, for example, is Rs. 5-10 per lb. and that fixed for blankets and rugs manufactured from Indian machine-spun woollen yarns is Rs. 4 per lb.

The maximum retail prices for a variety of worsted cloth manufactured in India are: Rs. 26 per lb. for worsted cloth (suitings, shirtings, flannels), shawls, etc. manufactured from imported worsted or union (R. C. quality) yarns; Rs. 22 per lb. for worsted cloth manufactured from cotton warp or cotton twisted with imported worsted yarn, with cotton contents not exceeding 25 per cent., Rs. 18 per lb. for worsted cloth manufactured from cotton warp or cotton twisted with imported worsted yarn with cotton contents above 25 per cent.; Rs. 20 per lb. for worsted cloth manufactured from imported worsted and union (T. C. quality, etc.) yarns twisted with rayon or staple fibre yarn and Rs. 9-8 per lb. for worsted knitting yarns of Indian manufacture.

Men's Ready-made Garments

The Central Government have fixed the maximum retail prices which dealers who sell ready-made garments may charge on the basis of the cost of the material plus certain specified making charges.

The maximum price chargeable for worsted or heavy woollen suits is the cost of the material plus Rs. 30, for a palm beach, light woollen, half woollen or silk suit it is the cost of the material plus Rs. 25, and for a cotton suit or a suit of other material not included above it is the cost of the material plus Rs. 15.

The Controller General of Civil Supplies has directed all dealers to mark the sale prices on all men's suits exposed for sale and cloth exposed for being made into suits to order.

These maximum prices chargeable, under the latest order of the Government, by tailoring establishments and dealers in men's ready-made garments, relate to ordinary tailors and establishments. A competent officer has been authorized to certify some dealers as belonging to class A or class B. Thus there are three classes, namely, ordinary, class A, and class B. The maximum charges allowed to each of these groups are set out below in the order of ordinary, class A, and class B:—

Worsted and woollen: Rs. 30, Rs. 100 and Rs. 60.

Palmbeach, light woollens, half-woollens, half-woollens and silk: Rs. 25, Rs. 75 and Rs. 40.

Cotton and other materials: Rs. 15, Rs. 50 and Rs. 25.

Officers Responsible for Administration of the Cotton Cloth and Yarn (Control) Order, 1943 in the Provinces

1. **Madras.—S. Venkateswaran, Esq., I.C.S., Provincial Textile Commissioner, Madras Record Office, Egmore, Madras.**
2. **Bengal.—T. Jones, Esq., Provincial Textile Controller, P-34 Mission Row Extension, Calcutta.**
3. **Bombay.—J. K. Thakore, Esq., B.A., LL.B., J.P., Provincial Textile Controller, opp. Kala Chowki Post Office, Parel Road, Bombay.**
4. **U.P.—A. D. Pandit, Esq., I.C.S., Deputy Secretary to Government of U.P., Civil Supplies (B) Department, Lucknow.**
5. **Punjab.—P. T. Ensor, Esq., I.C.S., Assistant Director of Civil Supplies, Supplies Department, Punjab, Lahore.**
6. **C.P. and Berar.—A. G. F. Farquhar, Esq., O.B.E., I.C.S., Secretary to Government, C.P. and Berar, Commerce and Industries Department, Nagpur.**
7. **Bihar.—K. S. V. Raman, Esq., I.C.S., Cloth Controller, Bihar, Patna.**

8. **Assam.—M. H. Hussain, Esq., I.C.S., Additional Secretary to Government L.S.G. (Industries), Department, Shillong.**
9. **Sind.—B. R. Patel, Esq., I.C.S., Director of Civil Supplies and Chief Controller of Prices, Sind, Finance Department (Textile Branch), Bombay Life Assurance Building, Karachi.**
10. **N.W.F.P.—A. J. Dring, Esq., Provincial Textile Commissioner, N. W. F. P., Peshawar.**
11. **Orissa.—B. Mukarjee, Esq., I.C.S., Deputy Secretary to Government, Department of Supply and Transport, Cuttack.**

Price Of Knitting Wool

By a notification issued under the Hoarding and Profiteering Prevention Ordinance, the Central Government have fixed the maximum selling prices chargeable by a dealer in respect of 14 different brands of knitting wool including Beehive Scotch fingering 3 and 4 ply, Diana 3 and 4 ply, Wendy Plain 3 and 4 ply, Wendy Baby, Crocheteen 3 ply, Lustre Wool (hand knitting Art Silk Yarn) and Pastorella.

Order on Silk Merchants

By a notification issued under the Hoarding and Profiteering Prevention Ordinance, the Controller General of Civil Supplies has directed all importers and wholesalers of pure and artificial silk yarn and silk fabrics in British India to maintain daily records of all sale and purchase transactions in respect of these yarns and fabrics and to submit to the Controller General of Civil Supplies, 1st Marine Street, Kalbadevi, Bombay 2, so as to reach him on or before the 15th day of every month separate statements of the stock position of these yarns and fabrics on the last day of the preceding month in a prescribed form showing the total stock, disposal during the month and the balance.

Profit Margin for Exports to Ceylon

The Southern India Chamber of Commerce have represented to the Government of India urging the revision of the allocation of the margin of profit for cloth exporters to Ceylon and other countries. They have pointed out that out of the present allocation of 20 per cent. margin over the standard price for export cloth, the millowners and wholesalers get between them 12 per cent. and the exporters with the remaining 8 per cent. have to meet export duty, Madras sales tax, railway freight, insurance premium, harbour dues and handling charges. The present allocation, the Chamber feel, is extremely unfair to Indian dealers and exporters and favours only the Ceylonese buyers.

15,000 Handlooms Idle in Chitoor District

It seems 15,000 handlooms are lying idle in the Chittoor District of the Madras Presidency. The demand for 60's (quality) yarn was very great, and the supply was very inadequate. Against the monthly quota of yarn of all varieties, ordinarily consumed which came to nearly 2,000 bales including all varieties of yarn, only 500 bales per month was allotted to the district. The supply of even these was coming very slowly and at irregular intervals.

Textile Control Board for Orissa

At a recent meeting of leading textile and yarn merchants held at Cuttack (Orissa), it was decided to form a Provincial Textile Control Board with 19 members. This Board will endeavour to facilitate sale and supply of textile goods in Orissa and also to root out black-marketing and profiteering in textiles and yarn. The sponsors of the move have approached the Government for its approval of the Board.

MADRAS CLOTH DEALERS' ASSOCIATION

Meets Provincial Textile Commissioner

The President and members of the Madras Cloth Dealers' Association met Mr. S. Venkateswaran, Provincial Textile Commissioner, and explained to him some of their difficulties in connection with retail business in textiles.

After tea, Mr. K. Balakrishna Mudaliar, President of the Association, welcomed Mr. Venkateswaran to the Association.

The dealers urged that wholesale licensees should not be allowed to keep retail shops also, that retail dealers should be assured of a quota of supplies arriving in the market, that steps be taken to end the present practice of wholesalers dumping unwanted varieties of cloth on retailers alongside varieties in demand and that the requirement as to submitting quarterly returns be changed to half-yearly returns. The Association also asked for representation on the Textile Advisory Committee.

Mr. S. Venkateswaran explained the present system of control and said that it was their desire to make it work smoothly and without hardship as far as possible. He appreciated the difficulty expressed by them in regard, for instance, to wholesalers forcing certain "unwanted" varieties along with the "wanted" ones. The wholesalers did this because, in their turn, they had under the quota system to take different qualities of goods produced by the mills.

While there were practical difficulties in making rules to stop such a practice, he expressed his belief that no retailer would be put to loss on account of taking goods on the mixed basis, though he realized it might mean some delay in realizing value. Where, however, retailers felt they were being unduly burdened with such "unwanted" goods, they could bring the matter to his notice and he would do the needful. He expected that when the system of quotas and linking of retailers to particular wholesalers was in full working, no dealer would find any difficulty in getting his supplies. On the question of returns, Mr. Venkateswaran said that it was essential that returns should be sent regularly by dealers as at present to show the actual stock position and it was in the interests of the merchants themselves to do so. Perhaps, at some future date, it might be possible to change over to half-yearly returns.

In conclusion, Mr. Venkateswaran told the dealers that while it might not be possible to shut out wholesalers from retail business altogether steps would be taken to see to it that no wholesaler discriminated against other retailers in favour of his own retail shop and no wholesaler opened new retail shops in localities where he did not formerly do business.

New Scheme of Cloth Distribution

Trade Proposals for Bengal

A "SCHEME for Distribution of Cloth in Bengal," has been submitted to the Government of Bengal by the Board of Textile Trade, recently constituted with representatives of 17 chambers of commerce and associations interested in the textile trade.

The consumers as also the traders in general in Bengal have been suffering for the last many months owing to shortage of supply and maldistribution. The control measures, so far adopted by the Government of Bengal, have not, from all accounts, been able to improve the situation even in regard to distribution, not to speak of procurement. It was, therefore, felt necessary that the trade representing all dealers from quota-holders to retail dealers should evolve a scheme for equitable distribution as also adequate procurement under Government supervision, if necessary, and with this end in view the Board of Textile Trade formulated a comprehensive scheme which was the subject matter of discussion when the Hon'ble Mr. H. S. Suhrawardy, Civil Supplies Minister, Bengal, received a deputation of the Board on the 30th October 1944.

The scheme envisages constitution of several panels for procurement, distribution, scrutiny, appeals, etc., as also committees in the mofussil, so that there may be an automatic control over distribution at controlled rates at all stages.

The following is the full text of the scheme:—

Constitution of Board of Textile Trade

The name of the Board shall be "Board of Textile Trade." The Board will consist of two representatives each of the recognized chambers of commerce and other recognized organizations having any interest in or concern with the textile trade. The Board shall have power to co-opt on it such persons as it may think fit and proper from time to time but the total number of such co-opted members shall not exceed one-tenth of the total number of elected members. The Board shall have power from time to time to invite all such person or persons for attending and taking part in the deliberations of its meeting.

Control of procurement, storage and distribution of piecegoods in Bengal should be vested in the Board known as the Board of Textile Trade. The Board shall be given full powers to enforce the provisions of the scheme under the Cotton Cloth and Yarn Control Order. Further, the Board shall be empowered with the powers to frame rules, collect returns and appoint persons and panels to exercise the powers of requisitioning goods, and to fix quota in case of difference and doubts and to exercise all powers and to do all acts that are necessary for the proper procurement and distribution of piecegoods in the province of Bengal.

Panels

For carrying out the different functions of the Board, there shall be formed from time to time such panel or panels as may be thought fit and proper by the Board. At present there shall be the following seven panels: Procurement Panel, Distribution Panel, Scrutiny Panel, Trial Panel, Appellate Panel, Publicity Panel and Finance Panel.

Each panel shall consist of seven members of whom two will be the Government officers, viz., the Provincial Textile Controller and the Textile Trade Adviser to the Government of Bengal and five will be the trade representatives to be elected by the Board.

In each important distributing centre of the Province of Bengal there will be formed mofussil committees under the control and supervision of the Board consisting of seven members out of which two will be the Government officials and five will be trade representatives to be elected by the traders of the area concerned.

Procurement Panel

It shall collect and compile all the necessary information and figures relating to the requirements of all the markets in the province and present supply through quota-holders, importers and other sources. All classes of dealers may import goods from surplus areas.

The goods allotted to the province of Bengal as a deficit zone, apart from the goods covered by the quotas and the imports by the importers as referred to above, received through the authorities, Central or Provincial, shall be procured by the Board and the Board shall distribute the same as it thinks fit and proper.

In case of any quota-holder or importer being no more in existence or being otherwise disqualified, the Board shall be entitled to procure the goods against his quotas and shall distribute the same as it thinks fit and proper.

Distribution Panel

Quotas amongst Dealers.—All the several classes of dealers, shall allot goods which have been received by them respectively against their respective quotas and imports to their respective dealers in proportion to the dealings that they had with them during the basic years on the basis of the amount of the turnover in value to the wholesalers at a fixed percentage over the ex-mill prices and to the commission agents and retailers at 10 per cent. and 4 per cent. over the ex-mill prices as the case may be. The goods which will be received by any wholesaler from his wholesale dealers on the basis of quota between dealer and dealer on the fixed percentage, shall not be subject to allotment by the dealer to any other wholesale dealer and these goods will be allotted by the said dealer only to the commission agents and retailers at 10 per cent. and 4 per cent. as the case may be on the basis of turnover during the basic period that they had with them. In case of any of the allotment holders from the quota-holders of "A" class (those who receive 50 bales or more per month) being no more in the trade the "A" class quota-holders concerned shall give to the Board the goods that would be left after giving to his existing allotment holders on the basis of the fixed rates as stated above and the Board shall distribute the same as it thinks fit and proper.

Retail to Retail.—The retailer may sell to other retailers and hawkers at the rate of 15 per cent. over the ex-mill prices and the mofussil retailers at the rate of 17 per cent. over the ex-mill prices.

Special Consumers.—Garment makers, dyers, bleachers and such other makers and hawkers having licences under the Control Order will be entitled to receive cloth from all classes of wholesale dealers (except commission agents) at the rate of 10 per cent. and 4 per cent. over the ex-mill prices, as the case may be in proportion to the dealings that they had with them during the basic years and on the basis of the amount of turnover in value.

Basic Period.—For distribution of quotas between dealers to dealers, the basic years 1940-41-42 will be applicable.

Inter-transactions.—Due adjustments of inter-transactions amongst dealers will be made before fixing the quotas of dealers to dealers.

Commission Agents.—Commission agents shall not be permitted to supply goods to any other person but to their own mofussil constituents who have had dealings with them during the basic years.

Quotas of Distributing Markets.—The Distribution Panel will fix the quotas for each market in the province and on the said basis, will also fix quotas between commission agents and their constituents after making necessary adjustments.

Remuneration of Commission Agents.—The commission agents shall charge their constituents the actual expenses and 1¼ per cent. commission as their remuneration.

Quotas for Calcutta and Industrial Area.—Separate quotas will be fixed for the retailers in Calcutta and Calcutta Industrial Area by the Distribution Panel.

Fixation of Quotas.—The Distribution Panel will fix quotas on the basis of the above principles between dealers to dealers.

Statistics.—The Distribution Panel will collect and compile all the necessary information and statistics for the above purposes.

Importers and Dealers in Foreign Piecegoods.—As a special case importers and dealers in foreign piecegoods who may not fall under the category of the aforesaid dealers shall be included under the class of wholesale dealers and allotment for them will be fixed by the Board from time to time out of the goods in the hands of the Board as it thinks fit and proper.

Brokers.—In addition to the brokerage being received on the goods being delivered from the mills under the quota system, from the quota-holders by the respective brokers, the brokers will also be entitled to get brokerage at the rate of ⅜ per cent. on the value of all packed bales sold and delivered by the dealers to the commission agents and retailers from the respective commission agents and retailers.

The Scrutiny Panel will scrutinize all current licences issued under the Bengal Cloth and Yarn Control Order and shall remove fictitious and superficial licence-holders. The Scrutiny Panel will also scrutinize the categories of all licence-holders in which the said licence-holder may do his business. Any dealer or person contravening the rules and by-laws of the Board shall be heard for necessary action by the Trial Panel. Any aggrieved dealer or person being dissatisfied with the decision of any panel, will be entitled to appeal to the Appellate Panel. Due publicity will be given to educate the dealers and consumers for making the scheme successful. It will be necessary to levy a cess to finance the administration of the Board and arrangements will have to be made for financing the goods to be received by the Board directly if any.

The Board shall prescribe forms of statements and returns to be filed by the several classes of dealers. The Board will be entitled to frame rules and regulations for the conduct of the Board and of all the several panels. The Board shall also frame rules and regulations for fixing the quotas between the dealers and dealers and/or delivery and payments amongst them.

Post-war Textile Machinery Purchases

Mr. T. Maloney's Suggestion

IN a letter addressed to the Editor of the *Manchester Guardian*, Mr. T. Maloney, M.C., A.M.C.T., formerly Secretary of the Millowners' Association, Bombay, writes :—

" Sir—In India, as in Lancashire, there has been no effective renewal or replacement of machinery in cotton mills during the five years of war, and during the whole of that time mills have all built up large funds from which renewals will be made. Small quantities of spinning and preparation machinery have been sent out to India for 'balancing' purposes and for absolutely essential war needs, but no machinery at all has gone to India for five years for replacement and renewal purposes, and, as Mr. B. B. Joshi recently pointed out, the bulk of the textile plant in India is something like forty years old. British-made textile machinery may be the best in the world, but even the finest machinery must be either obsolete or past its best after forty years of extremely hard wear.

" My definite view is that India will desire to replace the 10,000,000 spindles and 200,000 looms she now possesses within five to ten years after the cessation of hostilities. In addition she will wish to buy very considerable quantities of printing and finishing machinery. Lancashire will also be in the market for enormous quantities of new machinery in the immediate post-war years.

"It can safely be assumed that both India and Lancashire, for a variety of reasons upon which I need not enlarge here, will desire to buy their requirements of machinery in this country.

"I agree with Mr. Joshi and other authorities who have given thought to this problem that the combined requirements of Lancashire, India, and other countries such as the Dutch East Indies and China will very greatly exceed the supplies which British textile machinists will be in a position to manufacture within a reasonable time.

"In the circumstances it seems obvious to me that regulated purchase action (controlled and agreed on jointly by the Lancashire and Indian mill industries through the medium of their representative associations) in consultation with the Board of Trade, the Department of Industries of the Government of India and the cotton textile machinery manufacturers of Great Britain would be the only way of ensuring fair supplies and fair prices for all.

"The initiative for the institution of a system of regulated purchase could and should, in my view, be taken by the Board of Trade without delay. Failing action by the Board of Trade, I would suggest that steps be taken by the textile machinery industry of this country, acting as a unit, to ascertain at once from the Indian and Lancashire mill industries the quantities and types of machinery each will require in the immediate post-war period. Joint and considered action, if taken now, would do much to prevent an undesirable scramble for machinery by individual firms, resulting in unwarranted rises in prices which would detrimentally affect purchasers and suppliers alike and would, in the long run, cause England to lose the pre-eminent position she has occupied as a supplier of cotton textile machinery for so many years in so many markets."

The Manchester Joint Research Council

THE Manchester Joint Research Council held its first meeting in the Council Chamber of the Manchester University, Manchester, England, on 9th October 1944. On assuming office, the Chairman, Mr. A. H. S. Hinchliffee, J.P., made a brief statement.

"We must," he said, "make our existence and our work known in the right quarters. We must make full use of the Manchester Chamber of Commerce organization throughout the country, as well as the brotherhood which links the scientific world. We must establish a close liaison with the Department of Scientific and Industrial Research, and such other bodies as exist to further the objects we have in view. Our aim should be to do what we can to forge a link between the fundamental scientist and the industrial technician, and to stimulate enthusiasm for technical and qualitative advancement without which it is difficult to visualise how any nation with a Western standard of living can maintain its relative position in the world.

"If, as a result of getting to know each other, we can encourage the industrialist to seek out the scientist, and the scientist to come to earth occasionally and visit the factory, if we can cause the good to be less harsh to the clever and the clever less rude to the good, our efforts will be worth while and the totalitarian enthusiasts may find that once again they have miscalculated the potentialities of democracy."

"It is interesting to note that amongst the objectives of the Joint Council there is to be a concentration on ways and means of encouraging activities which will bring science and industry into closer relationship. Research will be equally encouraged and from time to time the Council will discuss questions and initiate special inquiries covering not only industrial and scientific matters, but also economic and sociological problems."

The Mills at Armitage Bridge

By J. W. DICKS (*Exclusive to the Indian Textile Journal*)

IN the industrial West Riding of Yorkshire, England, there yet remain surprisingly quiet and countrified spots which the mill and workshop have occupied but failed to conquer.

Such is Armitage Bridge, a little village lying in a dell some two or three miles south of the large industrial town of Huddersfield.

The mills are those of John Brooke and Sons, Ltd., and the Brookes are probably the most ancient family in the district. A Brooke was feudal lord of Huddersfield when there were fewer than 10 taxpayers on the manorial roll; at Kirklees Priory, nearby, John Brooke, also referred to as John de Huddersfield, was the last Prior before the dissolution of the monasteries by Henry VIII.

In August 1542, the family of Brookes acquired land and a fulling mill in Wooldale. Through 21 generations the business continued, passing direct from father to son to this day.

In about 1810 the building of Armitage Bridge Mills was begun, and the business then really went ahead, employing "upwards of a thousand souls." The site of the mill was chosen for the water-power. There were three water-mills, which generated 200 horse-power. This was tremendous in those days, and at the time the mills were certainly among the largest in Europe. The power was used for fulling the cloth. The first spinning mills at Armitage Bridge were not constructed for power, and housed primitive mules, or jennys as they were called, and these were pushed in and out by the spinner.

There was originally no weaving. This process was introduced about 1840. The yarn was spun, and sent out to the cottages of the hand-weavers on donkey-back, later to be returned as pieces ready for fulling and finishing.

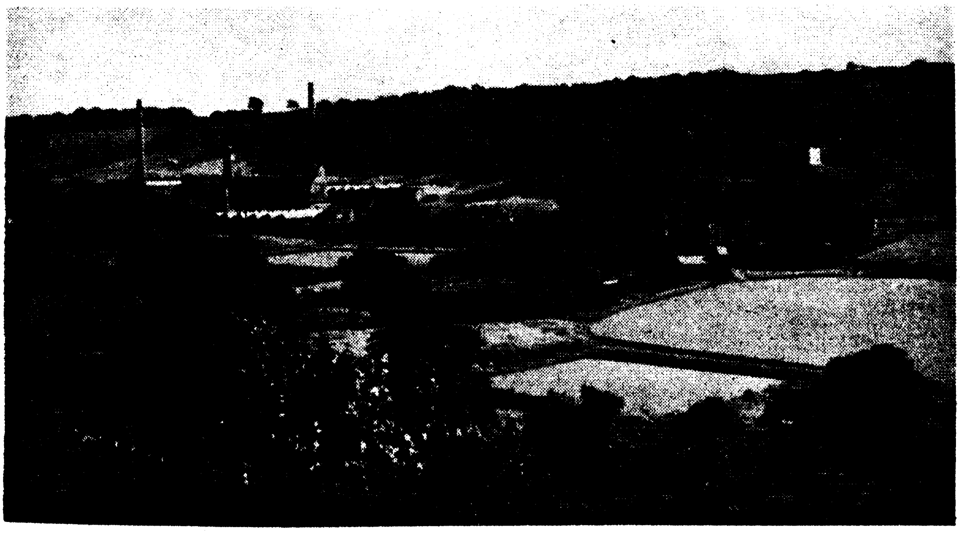
The worst features of the Industrial Revolution passed the Armitage Mills by. Then came World War I. The depression that followed it hit the firm of Brookes badly. The mills ran three days a week only, the buildings fell into disrepair, machinery was not replaced.

In the summer of 1938, Edward Brooke, son of Major Thomas Brooke, one of the two main shareholders, joined the firm, and two months later took over the management. By the autumn of 1938 the mill was on full time, and the spinning mills running night and day for the first time. By the turn of the year the company was making the first steady profits for over a decade.

The company started stocking up in wool, and ordering new machinery of the latest types of Swiss, Belgian and American as well as British manufacture. A progressive standardization of production was set on foot, and the relics of outworn trades and methods discarded. When war broke out in September 1939, the firm was already in top gear, and production since has outstripped all previous records.

New methods have meant introducing new cloths. The old-fashioned blacks and blues, meltons, beavers, doeskins and refines have given place to high quality piece dyes for ladies and children, velours, duvteens, angoras, alpacas, and camel hair. Just now the firm is entirely on Government contracts, but when the war is over it will concentrate with equal determination on winning back the quality export trade.

At Armitage Bridge, thermostat valves control the steam for heating and process, and the mills are fully electrified, power coming mainly from the grid, generated by the efficient Huddersfield Corporation Electricity Department. Over half the looms are driven by individual motor, and old shafting and belting are fast disappearing. In the old stone building where the water wheels once turned, clean white rooms house twin turbo-alternators, which run day and night under automatic control.



Commercial and Technical Organizations

Association of Electrical Undertakings, Central Provinces and Berar

Inaugural Meeting in Bombay.—The first meeting of the newly formed Association of Electrical Undertakings, C.P. and Berar, was held in the Taj Mahal Hotel in Bombay on 6th December 1944, under the presidentship of Mr. K. N. Arnold.

Speaking at a luncheon on the occasion of the inauguration of the Association, Mr. P. E. Patel, its Honorary Secretary, welcomed the councillors of the Association of Electrical Undertakings, Bombay Province. He said that "the idea of forming an association for Central Provinces and Berar had its inspiration from the successful working of the Bombay Association, credit for which goes in a large measure to its President, Mr. Paton, whose cheerful disposition and untiring efforts have brought about cordial relations between the Government and the electric industry.

"Some of us who are gathered here to-day ventured to form this new Association," he continued. "At first the prospects were not bright. Replies from two licensees of old standing were discouraging. However, we were able to secure the active co-operation of one of the best managed concerns in the province and the fruit of our endeavours is this gathering of prominent representatives of the Electrical Industry of the two provinces. With your good wishes and co-operation we will try to achieve the aims of the Association.

"One of the chief aims of the Association is to give to the Government and public bodies facilities for conferring with and ascertaining the views of the industry as regards matters directly or indirectly affecting the industry and to negotiate with them on behalf of the Association and of the industry as a whole on all questions likely to affect the Association. We wish to stand by our aim and offer to co-operate wholeheartedly with Government on all questions of electric supply industry whether local, electric grid or post-war planning, should they decide to take this Association into their confidence."

In conclusion, he expressed the hope that with the co-operation of those concerned the Association would be able to accomplish the task it had undertaken.

The following are the office-bearers of the Association:—President: Mr. K. N. Arnold; Vice-President: Mr. K. S. Guzdar; Honorary Secretary: Mr. P. E. Patel; Treasurer: Mr. C. J. Shah and Members: Messrs. E. M. Cassinath, J. B. Roongta, G. H. Sadarangani, B. K. Bana and E. J. Doongaji.

Association of Electrical Undertakings, Bombay Province

Annual Meeting.—At the fourth ordinary general meeting of the Association held in Bombay on the 22nd November, 1944, Mr. V. F. Noel Paton, President, reviewed the Association's affairs of the preceding year and referred to its growing strength.

Mr. Noel Paton stated that the Government of India as well as the Provincial Government seem disposed to proceed with considerations for electrical development without taking into account the interests who had done so much to develop electricity in the country and were conducting the industry now. He cited the instance of the Policy Committee of the Government of India which met in October, 1943, and which reached certain far-reaching conclusions without hearing the case of the electric supply industry, which was not represented as such on the Committee. He described the Committee as a "packed" one. The Government of Bombay had also been inclined to avoid consultation with the electric supply industry not only in regard to certain regulations which they had issued concerning accounts, but also on various other matters, including the current dispute between the Nadiad Electricity Co., Ltd., and the Nadiad Municipality, and the problem of rationing of bulbs.

Mr. Noel Paton referred to the efforts being made by the Federation of Electricity Undertakings of India to obtain a hearing in further deliberations of the Policy Committee and went on to say that this was a matter of the gravest importance which affected not only those concerned in the administration of supply companies, but many shareholders whose savings were invested in public utility electric supply companies.

He mentioned that somewhat better treatment had been obtained from the office of the Electrical Commissioner with the Government of India in that they seemed to circulate any proposals for comment and consideration before issuing orders.

Central Technical Power Board

He welcomed the formation of the Central Technical Power Board, and felt that something of this sort would be of unquestionable value to India. At the same time its value would be seriously impaired if the personnel of the Board were not *persona grata* with existing interests, and this could hardly be if the Government of India persisted in their present attitude of stifling criticism by the simple process of not giving the critics a hearing.

From this, he said, it should not be assumed that the industry as a whole was not prepared to accept very considerable increases in control. Such control was inevitable, and properly designed and administered could be nothing but advantageous. Those in authority were inclined to forget that the prosperity of the public was the touchstone of electrical development and that the industry's first interest was the increased prosperity of the people.

Amidst these clouds the only silver lining he saw was the speech delivered by Sir Ardeshir Dalal, Member for Planning and Development, Government of India, before the meeting of the Policy Committee for Industries recently held in

Bombay. If the policy adumbrated in this was a clue to Government's intentions, the situation was not without hope.

Future of Control

In keeping with the times it would be wrong not to welcome some form of control in the future, but he was of the opinion that the function of the State in this field should mainly be confined to the encouragement and co-ordination of the development in various provinces and some form of integration of theirs and private resources. In the great development he visualized in the post-war era the value of finance required would be immense and Government could ill afford to scare the investor. The investor must have confidence in the management of the undertakings if he was to continue to put in his money and so had the right to expect a fair return, fair treatment from the controlling authorities and the assurance that rules would not be changed constantly and without just cause.

Talking in the abstract about control and planning in the post-war world, Mr. Paton felt that there was no denial of the fact that beneath the effervescence of enthusiasm to bring about a happy new world by waving the magic wand of planning, it was still to be remembered that the greatest agency for the progress of mankind was the enlightened self-interest of the individual. The force of this contention had been recognized by the International Business Conference which recently met in the U.S.A.

The public had been kept advised of the so-called "Grid" which the Bombay Government were designing, but it might be many years before this attempt to develop the distribution of electricity could be regarded as a "Grid" in the proper sense of the word.

The councillors' report for the year ended 31st August 1944, which was adopted, stated that four firms were admitted to membership of the Association during the year, bringing the total number of members to 38. The following were elected councillors for 1944-45:—

Mr. N. C. Javeri, Mr. J. B. Maneckji, Mr. V. F. Noel Paton, Mr. P. E. Patel, Mr. N. N. Adajania, Mr. E. A. Nadirshah, Mr. K. S. Guzdar, Mr. F. J. Hecht, Mr. A. L. Guilford and Mr. S. J. W. Baldwin.

The Millowners' Association Bombay

Monetary Assistance for Rehabilitating the Cotton Textile Industry at the end of the War.—Following certain discussions which the Committee had with Sir John Sheehy and Mr. C. W. Ayers early in September, a representation was submitted to Government in which the following points were made:—

The expenditure to be incurred in re-converting the industry to the post-war footing should be allowed as an expenditure and adjusted in the last E.P.T. assessment, if such conversion took place within a specified reasonable period after the termination of the war or the removal of the excess profits tax whichever was later.

Mills had to defer until the end of the war certain repairs and renewals, which, though due, could not be undertaken as it would have involved curtailment of production resulting from stoppage of machinery. In this connection, it was suggested that where an industry had set aside a special sum for repairs and renewals, that should be allowed as deduction for the purposes of the E.P.T., even though it had not been utilized, on the understanding that if the amount was not utilized within a reasonable period after the termination of the war, then whatever had not been utilized could be regarded as income in the last year of the E.P.T. and assesssed as such.

The return of the industry from war-time production to peace-time production might involve the scrapping of buildings, plant and machinery which had been provided as part of the war effort. The law already provided relief in respect of any loss incurred, but it was pointed out that relief should not be confined to cases where the equipment was actually scrapped, but should also cover any loss of value in cases where equipment might continue in use.

Mills might hold at the end of the war stocks of various items which were carried at higher cost than would probably be justified by peace-time conditions. Stock figures and valuations were carefully scrutinized by the taxation officer to ensure that they were not unduly written off, and it was pointed out that, if the valuation taken for the purposes of assessment in the last year of the E.P.T. was not realized within a reasonable period thereafter, the assessee should be given an opportunity for reopening the last E.P.T. assessment with a view to set off the losses arising from the drop in valuation.

There would be cases in the last year of the E.P.T. when there might not be sufficient information at the time of the closing of accounts, and the assessee might possibly discover a loss after a year or two following the closure of the accounts. In *bona fide* cases, the assessee should be given an opportunity to reopen the E.P.T. assessment if he proved to the satisfaction of the authorities within a reasonable time after the assessment that when he closed the accounts he did not have sufficient information at his disposal to ascertain the exact loss.

Compensation for Involuntary Unemployment due to shortage of coal, raw materials, etc.—Towards the end of October, the attention of the Committee was drawn to a scheme formulated by the Government of India for the grant of compensation for involuntary unemployment due to shortage of coal, raw materials or changes in lines of production.

No legislative enactment was contemplated; Local Governments were apparently expected to use their powers to persuade employers to pay, sending appropriate cases to adjudication under the Defence of India Rules. The Committee felt that this procedure might perhaps lead to different conditions and rates of compensation in different provinces as there was nothing to prevent the adjudicators or conciliators concerned from proceeding on the assumption that the scales suggested by Government were only the minimum and that they were free to compromise at or award rates which might be substantially higher than those suggested by Government. It was, therefore, suggested that Government might issue an order fixing the rate and conditions of payment which could be statutorily enforced throughout British India and Indian States.

Arbitrators' and Umpires' Panels.—The Association has appointed the following gentlemen to serve on the Arbitrators' and Umpires' Panels for the triennium ending 31st March 1947:—

Arbitrators—*Millowners' Panel.*—Sir Sorab Saklatvala, M.L.A., Messrs. E. M. Solomon, B. S. Dabke, L. F. H. Goodwin, Ramniwas Ramnarain, G. D. Somani, Ramgopal Ganpatrai Ruia, Keshavji Morarji, Krishnaraj M. D. Thackersey, B. G. Davy, H. G. H. Everitt, H. F. Milne, Narandas Munmohandas Ramji, A. Pether and T. V. Baddeley.

Piecegoods Merchants' Panel.—Messrs. Harkisondas Premchand, Laxman Vaman Apte, Devjibhai Damodar, Premji Virji, Gordhandas Goculdas Morarjee, Dahyalal Mathuradas, Ratansi Champsey, Purshottam Mulji Kapadia, Padamsi Damoder Govindjee, Tansukhrai M. Karundia, Harnarayan Gopaldas, Jamnadas Mathradas, Gordhandas Vandravan, Mansuklal Premji and Maganlal Chakubhai.

Umpires.—Sir Sorab Saklatvala, M.L.A. Messrs. Krishnaraj M. D. Thackersey, Purshottam Mulji Kapadia, Ramniwas Ramnarain, Premji Virji, T. V. Baddeley, A. Pether, Devjibhai Damodar, Gordhandas Goculdas Morarjee and H. G. H. Everitt.

Representative on the Senate of the University of Bombay.—By virtue of the recent donation given by the Association to the Department of Chemical Technology of the University of Bombay, the Association would be entitled to nominate a Fellow on the Senate of the University of Bombay for a period of twenty years from the date of acceptance of the donation by the University in addition to the right which the Association already enjoyed in the matter of electing a representative under Section 13A(4) of the University Act.

Accordingly, the Registrar, Bombay University, requested the Association to nominate an additional representative to serve on the Senate, and the Committee appointed Mr. Neville N. Wadia as the Association's additional representative.

Cotton Textiles Fund Ordinance.—By an amendment to the Ordinance, the Collector of Customs was given power to exempt goods which, in his opinion, were exported for a purpose connected with the prosecution of the war. The Association suggested that the grant of such wide discretionary power to the customs authorities might be cancelled and that the duty might be levied on all goods exported, irrespective of the purpose for which they were exported.

Industrial Disputes Act, 1938, *Amendment.*—By certain amendments proposed, Government seek to empower the Government Labour Welfare Officer.

(*a*) to convene a meeting of the employees within the mill premises and

(*b*) to require the employer to affix a notice of the meetings at such conspicuous places in the premises as he might order and to further require that the notice shall be so worded and contain such particulars as the Labour Officer may direct.

In view of the fact that in working of the Bombay Industrial Disputes Act, 1938, the Government have received the unstinted cooperation of the millowners, the Association fails to see the need for such amendments and has, therefore, taken up the matter with Government.

Karachi Chamber of Commerce, Karachi

Textiles ex s.s. "Englistan."—Towards the end of August the Chamber's attention was drawn to the fact that the Government of Sind had not, even by that date, released from the Freezing Orders a quantity of cotton piecegoods imported by merchants from Bombay ex s.s. "Englistan," which arrived on the 11th June, 1944.

In addressing the Controller of Civil Supplies, Government of Sind, on the subject, the Chamber submitted its strongest protest against the inordinate and apparently unnecessary delay. Likewise the Chamber made a reference to the manner in which requisitioning from fresh arrivals had been carried out. It was found that this largely had meant that more easily saleable lines had found their way to the Government controlled shops, leaving on merchants' hands those lines of which stocks were more ample or were slower sellers. The Chamber considered that this action "unbalanced" merchants' trade and was most undesirable.

The Assistant Director of Civil Supplies explained at length the technical difficulties which caused the delays complained of. He further observed that Government had not frozen any of the goods that arrived in Karachi after the first week of June (besides the "English" goods of early June). With regard to the freezing orders of foreign imports entering Karachi after the 1st July, 1944, he drew the Chamber's attention to the Textile Commissioner's letter of the 27th May, 1944, which required that all foreign imports should be price-marked. In order to ensure that price-stamping was done it was necessary to issue a freezing order.

Sind Cotton Statistics Bill, 1944.—Referring to the Bill to facilitate the collection of statistics of stocks of Indian raw cotton in the province of Sind, the Committee offered their observations thereon to the Chamber's representative on the Sind Legislative Assembly, requesting him to emphasize these views when the Bill was brought up for discussion in the Assembly.

The Committee's views were as follows:—(1) It was not agreed there was any real necessity for the legislation. (2) The full penalties of Rs. 500 and Rs. 200 prescribed in section 7(c) would probably never be imposed, but without an adequate penalty clause the Act would remain a dead letter. The Chamber was therefore in favour of the penalties remaining as prescribed in clause 7(*c*). (3) The Chamber would favour an extension of the period allowed for submitting returns [clause 3(3)] from seven to fifteen days.

Transport of Raw Materials for Industries.—Towards the middle of August the Under Secretary to the Government of India in the Department of Industries and Civil Supplies drew the attention of the Chamber to the fact that several cases had come to the notice of Government whereby, taking advantage of the high standing priority of transport in respect of raw materials enjoyed by certain important industrial concerns, goods really not intended for such concerns had been consigned in their names with the obvious motive of obtaining transport. The Chamber was requested to inform such of its members as enjoyed high priority for their raw materials that they should not assist such irregularities by wrongfully endorsing railway receipts or by acquiescing in any action which, apart from constituting a misuse of a privilege, was bound to delay the movement of essential materials to themselves.

The members were duly apprised of the situation.

Marwari Chamber of Commerce, Calcutta

Complaints Regarding Abuses in Permit System.—Several anomalies and lacunas that obtain in the issue of permits against requisitioned piecegoods have been pointed out by the Committee of the Marwari Chamber of Commerce in the course of a communication addressed to the Provincial Textile Controller, Bengal. The Committee complain that permits are being issued without any principle and even blank permits are being issued ; besides inspectors of the Textile Controller's office often accompany the permit holders and make alterations in the permits. It has been further complained that instructions given to the district authorities often make it impossible to select *bona fide* agents and many agents having no ready money find it difficult to take prompt delivery of the goods. The Committee also regret that permits have been issued to persons holding no licence and in some cases to dealers having no sales tax licences and yet in other cases to persons for their individual use. The Committee have also pointed out that the direction given in the Press note that permits would lapse if not presented within five days from the date of issue is not being incorporated in the permits. The Committee have therefore urged a thorough inquiry into the state of affairs with a view to effective control and equitable distribution.

Bangalore Piecegoods Merchants' Association, Bangalore

Sixth Annual Meeting.—The following are extracts from the speech delivered by Mr. Ramnarayan Chellaram, B.A., President of the Association, at the sixth annual general meeting held at Bangalore, on the 14th November 1944:—

Cotton Cloth and Yarn Control Order

"It cannot be claimed that black markets in cotton cloth and yarn have completely disappeared from all markets. In the main manufacturing centres one has still to pay more or less fancy prices, especially for the finer varieties of both cloth and yarn. With all this there is no doubt that a large variety of goods are being sold within the prices and margins of profit fixed by the Government, both in the manufacturing as well as in the consuming centres.

"There are certain aspects of the present scheme of distribution which call for an unbiased examination. Certain areas have been allotted as many as eighteen yards per head per annum and others as few as ten yards per head. Neither the public nor the trade have been taken into confidence as to the data on which this arbitrary allotment of quotas per head of population in each area has been fixed. In the absence of such information the scheme is bound to produce, as indeed it has done, considerable amount of concern and discontent no less among the consumers than among the traders in the areas adversely affected. Another very glaring defect of the scheme is that it completely ignores and fails to protect, excepting in the case of Delhi to some extent, the existence of distributing centres which have been established for decades and centuries following natural and convenient trends of trade. The effect of the scheme will be to ruin certain very big markets in the country which have built up their trade after years of labour and perseverance and after investment of huge sums of money in the trade, besides putting countless traders and their employees in those markets to a considerable amount of hardship and loss of employment. It will also very seriously affect the consumers in places whose traders are obliged to give up their normal sources of supply and seek fresh sources wherefrom it will be more difficult for them to procure supplies, due among other reasons to distances, unfamiliarity and lack of purchases during the basic years. This is a very serious problem and as supplies become shorter in the affected established markets with the lapse of time, the problem will become more and more acute, resulting, one need not be surprised at it, in extensive black marketing in the areas concerned. It is bound to take a pretty long time for the trade to adjust itself to the consequences of the new scheme and the consumers and the smaller traders in many areas must look for a considerable amount of suffering and hardship, not to speak of the entire loss of trade in the case of many others.

Difficulties of Transport

"Transport continues to be a formidable problem. We have been assured, from time to time, that the Government of India are making all efforts to release an adequate number of wagons for carriage of consumer goods to the interior. But, as you all know, bales of piecegoods have often-times been held up for weeks and weeks together at the manufacturing stations accentuating the shortage in the consuming centres.

Defects in the Quota System

"There have been instances on record where dealers have received as their quota from particular mills quantities which have no relation to the meagre purchases they made from those mills in the basic years. Smaller merchants throughout the country whose direct trade in the aggregate with the mills did not form an inconsiderable portion of the respective mills' trade have been denied the privilege of directly purchasing from those mills. The cases of indentors of mills which are more or less on war work which has deprived them of their normal supplies, have not received at the hands of the authorities the consideration which they merited. The dealers who were purchasing goods in the basic years from mills whose production has now been taken over by the Textile Commissioner have been deprived of their legitimate right of purchasing those mill goods. Legal rights of some parties to their legitimate quotas from mills do not appear to have been properly respected.

Difficulties of Border Towns

"With the introduction of quota system both from the mills to the dealers and from the Textile Commissioner to the provinces and States and the new scheme of distribution of cloth we are tending to be more and more parochial. The result is that in not a few cases, places in one geographical unit, due to their proximity to a distributing market located in another geographical unit, are suffering. The merchants of these places are unable to obtain their requirements from their normal suppliers and the merchants in their own districts refuse to sell them any goods because they were not buying from them during the basic years, and in some cases even when they manage to get some supplies from them they find it difficult, due to their situation, to carry their purchases to their places excepting at prohibitive costs. Such cases deserve a more sympathetic consideration than unfortunately they have received so far from the authorities concerned.

Margins of Profit

"Experience has clearly demonstrated the utter inadequacy of the margin of 20 per cent. allowed to the entire distributing agency throughout the country including the cost of carriage of goods from the manufacturing to the distributing and from the distributing to the consuming centres. This inadequacy has become more pronounced on account of the progressively reduced prices of cloth. It has been estimated that it costs a wholesaler in a reasonably far place from the main distributing centres like Bombay about 4½ per cent. to get his goods, and this does not include expenses of his travel to and from Bombay and his stay there. Nor does it include the expenses which a dealer is sometimes obliged to incur and which are such as he cannot write in any books of account. After paying 4 per cent. to the quota holder and 4½ per cent. for his commission agents, brokers, godown rent, war risk insurance, cartage, interest and transport charges, etc., it leaves him a margin of 1½ per cent. out of which, before counting anything as his profit, he must bear the expenses in his home town such as cartage, godown rent, insurance charges, staff expenditure, etc. It has therefore been urged on the authorities that they should increase the margin of profit at least by 2½ per cent. to be distributed over the entire field of distribution excepting its retail end. It has also been urged that the first quota holders' margin should be reduced from 4 per cent. to 2½ per cent. It is very much to be hoped that the authorities will see their way to accept the reasonableness of this demand and increase the margin of profit from 20 to 22½ per cent.

"It is necessary for the Government of Mysore to consider the desirability of increasing the staff in the office of the Additional Textile Commissioner who is also the Controller of Civil Supplies in the State, having to deal with a number of controlled articles."

Reconversion of American Automobile Industry

A REALISTIC examination of the circumstances and figures of American production indicates that the end of the war with Germany will release a substantial portion of the demand on American industry for war production, Alfred P. Sloan, Junior, Chairman of General Motors Corporation, stated in recent addresses before the G. M. Clubs of Los Angeles and San Francisco.

"We now have reached the time," Mr. Sloan said, "when we undoubtedly have both an army and navy remarkably well equipped, not only from the standpoint of quantity but also of technical superiority. The time must come when some radical changes will take place in the demands on American industry for war production. My own belief is that when the war with Germany closes we have to move very rapidly towards reconversion."

"General Motors will start production with models of conventional design because it would be unconscionable for us to take the position that we could redesign our cars and keep hundreds of thousands of people out of employment, and keep our dealers waiting for cars. What we propose to do is to make such changes as are practical within the area of time that is permissible, keeping in mind also the importance of getting back into production and maintaining employment."

In speaking about General Motors' first real post-war car, Mr. Sloan said that its production would take about two years "after we get a complete release of all our facilities, after our engineers and technicians are released to us, after our Proving Ground and all the other things are turned back to us that are now being used by the Government."

"The real post-war car," Mr. Sloan said, "will not be radical or dramatic, but will be lighter in weight, more economical with a smaller motor to use higher octane gasolines and much more attractive both in exterior and interior appearance. The reduction of weight will come through more intensive use of material, and that is not a war development, particularly. We knew pre-war that it was possible for us to reduce the weight of the car through engineering developments that were then available to us, but the war intervened and of course it was impossible for us to capitalize on that improved engineering concept at that time."

Mr. Sloan explained that through the lessened weight and higher octane gasoline in higher compression motors, he believed that the overall increase in economy would be 20 to 25 per cent.

TRADE LETTERS

(From Our Special Correspondents)

Ahmedabad

CLOTH merchants are feeling apprehensive at the note of warning sounded by Sir Akbar Hydari of wiping them out of existence if black markets still persisted in spite of all the measures adopted by Government after two months. About 700 retail merchants have already lost their trade by the quota system adopted by Government and followed in their footsteps by the wholesale merchants. Black markets, according to Sir Hydari, have been virtually stopped by mills, but are continued by merchants who are evidently wholesalers getting quota direct from the mills. Government have fixed quotas for each province and arranged railway facilities accordingly. There is now no reason why cloth should not be distributed all over the country at controlled rates. Still if black markets in cloth are created, it is the policy of Government, declared by Sir Hydari, to undertake the distribution of cloth.

It is not known what machinery Government will devise for this purpose, but it is clear that after the working of cloth control for one year and a half Government is in a position to displace the entire existing trade channel which Government has tried hitherto to retain as far as possible. Government has permitted mills to sell 10 per cent. of their production in their own shops at the full margin of 20 per cent. reserved for merchants. Government will watch this experiment for two months and extend it if circumstances require it. Government is also trying the experiment of running approved cloth shops through selected merchants and some co-operative societies. This experiment which was initiated in Bombay, has been started in Ahmedabad. These two experiments will enable Government to take the next step after two months in the direction of checking the black markets.

The handling by Government of the food and cloth problems is revolutionizing our old economy. The rationing of foodgrains and cloth control are creating a new economy in the country which will have far-reaching effects on post-war economy. A new distribution machinery is coming into existence which will not stop with the distribution of foodgrains and cloth but will cover the entire field of consumer goods. Production, which has been stepped up to the highest pitch by war conditions, requires a new distribution machinery suited to these new conditions. It is gradually taking shape and will evolve into a mighty structure which will help the post-war industrial growth of the country if properly planned and devised. The post-war planning of industries by Government will be linked with the new distribution machinery.

Yarn Distribution

Along with the distribution of cloth, distribution of yarn is being undertaken by Government at controlled rates direct to the consumers without any middlemen. Consumers, who are mostly hand and power-loom weavers, are asked to submit their requirements which will be met from the stocks frozen from certain mills and merchants. Distribution of yarn will accelerate the production of cloth to some extent. If hand spinning is stimulated along with the distribution of yarn there will be an abundant supply of cloth in the country. Mahatma Gandhi has taken to constructive work which includes hand spinning and it is hoped that hand-spun yarn will be available in sufficient quantities to meet the requirements of the handloom weavers. India has a golden opportunity during the continuance of the war and for some time after to stabilize her industries including the great cloth manufacturing industry.

Textile Labour Association

The Textile Labour Association is marching ahead with its new programme for the social betterment of workers. It has started the training of the second batch of volunteers who will work in labour areas as social workers. The Co-operative Labour Bank has been registered and will start working shortly to draw the savings of workers which are being frittered away. 1,40,000 workers of Ahmedabad, who get the highest dearness allowance in the country, wield tremendous purchasing power over the rest of the population of the city which keeps up our cost of living index to a high level although it is declining in other cities where rationing and other controls are working. The only way to lower our cost of living index is to reduce the dearness allowance of workers or to canalise part of it in savings. The Textile Labour Association prepared a scheme of compulsory savings for workers which was not acceptable to the Millowners' Association. The Labour Association has thereupon prepared the scheme of a co-operative bank which, if made popular among workers, will put a salutary check on their purchasing power to the great relief of the rest of the population whose income has not increased in proportion to the increased cost of living.

Calcutta

Jute Workers' Demands for Wages

TWENTY-THREE unions of the jute workers, representing 40,000 members of the entire jute trade, have jointly submitted a representation to the Government of Bengal demanding immediate institution of an adjudicator under rule 81A of the Defence of India Rules to consider the vital demands of the jute workers concerning their wages, dearness allowance, service rules and similar matters. The principal points in the representation are demands for Rs. 2 as dearness allowance, Rs. 40 as minimum wage, security of service and bonus. In support of the representation the Bengal Trade Union Congress have decided to launch a campaign to mobilize resources all over the country.

Release of Frozen Cloth

In a communication to the Textile Commissioner the Committees of the Bengal National, Indian and Marwari Chambers of Commerce and the Marwari Association have requested him to direct the Provincial Controller to restore forthwith the surrendered and requisitioned cloth numbering more than 15,000 bales which have been frozen under the Emergency Cloth Distribution Scheme since the middle of September last. The Chambers have suggested that the requisitioned goods should be returned to the owners with instructions to distribute the same amongst their customers in the trade. They have also opposed the proposal of the Government of Bengal to control the entire distribution in future as they apprehend that it will dislocate normal trade channels. They have further emphasized that the principle of distribution should be laid down by the Textile Commissioner and not by the Provincial Governments.

Yarn Distribution to Weavers

The decision to place immediately about 2,000 bales of yarn at the disposal of the Director of Industries, Bengal, for distribution amongst the distressed weavers in the mofussil was taken at a conference of the representatives of the Bengal Government, the Provincial Textile Control Advisory Committee and of weavers. The Government would provide funds for the purchase of this stock. This yarn will be distributed generally at nominal prices and in certain cases free of costs.

Rationing of Yarn

The suggestion of a census of weavers of Bengal and rationing of yarn on that basis was hinted by the Minister in charge of Civil Supplies at a conference of yarn merchants, quota-holders and other interests involved and sub-divisional officers of all important weaving centres. The Minister explained the various difficulties that confronted the Government in regard to the acquisition and distribution of yarn. He said that 14,000 bales of yarn were required for Bengal normally and Madras had consented to supply 10,000 bales and Bombay 2,000 bales. Out of this allotment 1,500 bales would have to be supplied to Assam. Thus Bengal was facing a deficit of 3,500 bales. The Minister said that in view of the deficit in supply a census of the weavers would be necessary for estimating the total requirements of the weavers and yarn that would, therefore, have to be rationed.

Regulation of Deliveries and Sales of Cloth and Yarn

The Provincial Textile Controller has directed that all dealers in mill-made cloth in Bengal shall, with immediate effect, regulate their sales and deliveries of mill-made cloth and yarn to those dealers who were on the books on the years 1940, 1941 and 1942. The implication of this order is that quota-holders, importers and semi-wholesalers shall distribute their cloth and yarn to their customers in the same proportion as they purchased in the basic years. The above illustrates the broad principles of the Scheme of Distribution which is to be put into effect immediately by the cloth and yarn merchants under the directions of the Provincial Textile Controller. Detailed instructions have been circulated to the district authorities, different chambers of commerce and associations and all merchants have been directed to follow these instructions. Meanwhile cloth and yarn merchants must dispose of their existing stocks which have not been frozen or requisitioned only to those merchants to whom they sold in the basic years. The Provincial Textile Controller has further directed that all bills of lading should continue to be presented to the Provincial Textile Controller as now for endorsement. Each railway receipt or bill of lading should be accompanied by two separate statements giving particulars of invoices, that is, coarse and fine goods in the case of cloth and coarse and fine counts in the case of yarn. Finer goods will continue to be frozen and distributed through approved shops.

Bengal Not to Export Cloth to Assam

Dealers in cloth in Bengal have been reminded by the Government that they are not permitted to sell cloth outside Bengal without explicit instructions of the Provincial Textile Controller. Assam is now excluded from the Bengal zone and receives her quota direct from the Textile Commissioner. No despatch of any type of cloth with the exception of standard cloth is now permissible for export to Assam.

Government's Scheme of Cloth Supply to Retailers

It has been decided that, as far as possible, distribution to retail shops in Calcutta shall be made through the associations of retail dealers who have been advised to become members of one or the other associations, as early as possible, or organize themselves into associations. No association will be recognized by the Government unless its membership is 100 and it is prepared to give an undertaking to the Government in regard to the method of distribution of cloth. Each association will have to submit a return showing the full name and address of each of its members and also licence number, sales tax number and date of first registration, with signatures of the members certifying that they are attached to one of the associations and will accept the rules of distribution framed by the associations and approved by the Provincial Textile Controller. They must also accept the cloth allocated to them and the conditions under which allocations are made. No retail dealer shall be a member of more than one association for the purpose of distribution of cloth and if he signs the form of declaration of more than one organization he will hold himself liable to have his licence cancelled. Each association shall divide its members into two classes, that is, those dealers who were in trade in the years 1940-41-42 and the dealers who commenced their business after 31st December, 1942. Due to the existence of several retail dealers' associations all *bona fide* retail dealers' associations shall be recognized if they conform to the above rule. This scheme, declared the Provincial Textile Controller, is being adopted pending the framing of a final distribution scheme by the Bengal Government.

Government Scheme Criticized

The Committee of the Bengal Textile Quota Holders' Association have protested against the proposal of the Government to select some agents and retail shops for distribution of the fine varieties of cloth. They have observed that in view of the scheme being based on the principle of quota any distinction between the fine, medium and coarse cloth seems to be superfluous. The Committee see no justification for making any distinction among the various varieties of cloth all of which, according to them, should, as usual, be distributed through the existing trade channels as heretofore as the exclusion of fine goods is bound to ignore the rights of some and give undue preference to others.

Minister Explains Emergency Measures

In explaining the several emergency measures the Minister in charge of Civil Supplies said that the appeal of the Provincial Textile Controller produced 7,000 bales of cloth, a proportion of which was readily saleable and acceptable to the trade. Orders were passed forbidding deliveries of textile goods imported from outside Bengal without the authority of the Provincial Textile Controller and all consignments above five bales had been frozen and placed at the disposal of the Government. A consignment of 4,000 bales of cloth arriving by special train had also been frozen. The Minister added that a hundred well-known retailers were first selected, to each of whom five assorted bales were distributed. Four retail dealers' associations were each being given 200 assorted bales for distribution amongst their members. The *bona fides* of the retailers were to be carefully scrutinized because it had come to the notice of the Government that a number of quota-holders and wholesalers have opened up several retail shops in different names with the result that the older retailers had been deprived of supplies while the wholesalers reap the benefit of the entire trade margin of 20 per cent. Cloth was also being sent to the mofussil through traders recommended by the local authorities at the rate of 50 bales for each sub-division as a first step. The Minister informed them that much larger quantities were reserved for the mofussil which would be allotted as and when *bona fide* dealers from the mofussil were recommended by the District Magistrates and Sub-divisional Officers. These emergency measures had to be adopted as cloth was now being sent to Bengal in considerable quantities and Government must make sure that it did not run underground or was held up by the wholesalers.

Disposal of Requisitioned Textile Goods

The dealers who voluntarily surrendered a portion of their stocks to the Provincial Textile authorities have been permitted to sell all the other goods which have not been frozen or requisitioned in bale lots or in open bales. In addition, the following goods have also been released for sale: (i) all loose goods surrendered to the Provincial Textile Controller, (ii) blankets, (iii) cotton raised cloth known as malidas and flannelettes, (iv) hosiery goods, (v) handloom cloth, (vi) hand printed and hand dyed cloth, (vii) all varieties of artificial silk-fabrics with the exception of such fabrics as contain less than 50 per cent. artificial silk yarns. Those cloth merchants who did not voluntarily surrender any of their stocks have been warned that they are not covered by the above concession and that such dealers are to disclose full particulars of their stocks to the Provincial Textile authorities immediately, if not already done.

Cloth Problem of Bengal

Bengal was being allotted cloth on the basis of 10 yards per head per annum while the Punjab, Delhi and Bombay were being allotted 18 yards per head annually in spite of the fact that she was in the war zone, having more war industries and with more military personnel and contributing more to the war effort than any other province. This fact was revealed by the Minister in charge of Civil Supplies while addressing a meeting of the Provincial Textile Advisory Committee in which he emphasized that all his efforts to convince the Textile Commissioner for sympathetic consideration for Bengal failed and her quota was reduced to 10 yards. He further stated that the original allotment of 12 yards per head for the whole of India had been calculated on the assumption that every bale contained 1,500 yards whereas the average bale actually was made of 1,150 yards. The Minister said he would make a strong representation to the authorities in the matter. Condemning the unsocial activities of a section of the textile trade, particularly the wholesalers, he declared that that Government had no alternative but to select such parties for distribution of finer cloth over whom they would be able to exercise control. He announced Government's decision to control the sale through 150 shops to be selected by a tribunal set up for this purpose. He warned the textile trade that if black-marketing and profiteering continued Government would have no other alternative but to take control of stocks and distribute them through Government organizations. Referring to the request of the trade to allow normal trade channels to function, the Minister pointed out that normal trade channels had already been disturbed under the orders of the Central Government by the introduction of the quota system and for all practical purposes it was not possible for any Government to allow under the prevailing times and situation normal trade channels to function without any interference in Bengal. Keeping all these points in view, the Government had, on the advice of the Distribution Committee, brought into operation a new scheme which made it legally obligatory on all quota-holders and importers to supply goods to those of their dealers who were on their books for the period 1940-41-42 and the dealers, in their turn, would supply to the retailers who were on their books for the same period on the same lines and according to the same principles as had been laid down under the quota system of the Government. To set right the maladjustments which were bound to occur in certain cases where the link between one class of dealers and another could not be properly established and in those cases where certain sub-divisions received more than their quota and others received less than what was due to them a tribunal had been set up. A unanimous resolution passed in the meeting recommended that the Bengal Government must protest strongly against the action of the Central Government in allotting to Bengal 10 yards per head per annum while larger quantities were allotted to other provinces as this policy of discrimination among the provinces was absolutely inequitable in principle and unfair in practice.

Suggestions for Making Yarn Distribution Effective

In a statement on the present scheme of distribution of yarn which has come into operation from the 15th November, the Honorary Secretary to the Calcutta Yarn Merchants' Association has expressed the view that the scheme, based on quota-to-quota basis, seems sound in principle and is the only practical step the Government have so far taken to ensure suitable distribution. But it is apprehended that the scheme would not succeed if the freezing orders in respect of counts 20s and above continue. It is stated that practically 90 per cent. of the goods coming to Bengal are of counts 20s and above and if freezing in respect of these goods continues distribution according to the new scheme would be impracticable. It is suggested that if the quota from dealers to dealers is fixed on the basis of 1940-41-42 business as in the case of mills, black market will automatically cease to exist and, therefore, it has been urged on the Bengal Government that immediate release orders should be issued so that yarn may flow through the normal trade channels according to the proposed distribution scheme.

South India

Mysore's New Hydro-Electric Scheme

NOT for nothing has the State of Mysore been described as "The Model State." Its history in recent years shows an almost unbroken record of achievement in practically all spheres of activity, most notably, perhaps, in that concerned with the economic development of the State's natural resources.

The Jog Falls hydro-electric scheme, as it is called, which has been put in hand by the Mysore Government, will utilize the waters of the Sharavati River for generation of the necessary power. For those who are concerned with geographical accuracy it may here be noted, in parenthesis, that Gersoppa is the real name of the falls. They are situated on the Mysore-Bombay frontier, about 18 miles east of Gersoppa and 35 miles east of Honavar. But they are locally known as the Jog Falls, after the neighbouring village of Jog. They occur, as stated, on the Sharavati River which eventually finds its way through a deep, winding gorge to the Arabian Sea.

As a matter of further interest it may be mentioned that the waterfall, with a breadth above the falls of about 230 feet, hurls itself over a cliff 830 feet high, in four separate cascades, known as the "Horseshoe Fall," the "Roarer," the "Rocket," and "La Dame Blanche." The Gersoppa Falls eclipse every other in India, and have few rivals in the world for height and volume. In the former respect it is noteworthy that their drop is more than four times that of the Niagara Falls.

Owing to the varying flow of the river at different seasons of the year—a factor of great importance in India owing to the extremes of hot, dry weather and monsoon floods—sufficient storage capacity to supplement the dry season flow is a necessary part of the scheme.

A reservoir is, therefore, being constructed, at Hirebhasgar, about 13 miles up-stream from the falls, having a storage capacity sufficient to supply power to the generating plant for the maintenance of an output of 120,000 k.w. The reservoir dam will be provided with sluices to let down the required quantity of water for power purposes, and with gates and syphons to pass flood waters during the monsoon. The water from the reservoir will be recovered from the river by a barrage at Karagal, about 10 miles downstream from the dam.

The generating station is being constructed on the left bank of the river about a mile from the falls, from which the nearest point on the metre-gauge system of the Mysore State Railways is at Talguppa, about nine miles from the works. A road and a road bridge across the river have been built for the transport of materials to the works. The installation so far authorized includes four generating sets of 17,500 b.h.p. each, making a total of 70,000 b.h.p., and the requisite turbines, of the impulse type, are supplied by Messrs. Boving & Co., the water-power engineers. The alternators, as well as outdoor switch-gear and step-up transformers, are supplied by Messrs. The British Thomson-Houston Company.

Thus the Jog station, in the extreme north-west of the State, will be interconnected with the existing stations, namely, Sivasamudram and Shimsha. The Jog Scheme, when completed, will cost over four crores of rupees.

Ceylon Government and Madura Handlooms

The Secretary, the Northern India Handloom Cloth Merchants' Association, Ltd., Madura, has addressed the Government of India in the Commerce Department, on the plight of Madura handloom industry consequent on the recent Ceylon Government's Textile Control Order. He says that it is a matter of common knowledge that Madura handloom fabrics are in great demand in Ceylon, which is, as a matter of fact, the only island of export for Madura at present. Madura weavers are employing highly-skilled workers to weave intricate Jacquard designs by paying very high wages and thereby incurring heavy cost of production of these designs. Owing to war conditions, the cost of patterning of these designs has considerably gone up and the upkeep and repair of these Jacquard loom boxes have also become a very costly affair. Besides these, there is also the question of dyes, as Madura weavers, for the most part, are paying the maximum dyeing charges for dyeing Indanthrene to bleach rare colours for their special qualities. When all these practical things are taken into consideration, it will be found that the basis of costing of these special qualities should be properly revised and sufficiently increased to meet the actual conditions. Should the Ceylon Government rates of prices be enforced the handloom industry of Madura will be practically killed, and several thousands of workers will be thrown out of employment.

Ban on Export of Cloth from Pudukottah

The Pudukottah Durbar have promulgated the Pudukottah Cotton and Yarn Order, banning the sending of cloth or yarn by way of inland parcel post to places outside Pudukottah State. The postal authorities are empowered to open any parcel suspected to contain yarn or cloth and are forbidden to book such parcels. Goods sent in contravention of the above order, are liable to confiscation by the State.

Silk Control in Mysore

The subject of silk control was discussed at some length at the last session of the Mysore Representative Assembly and several members pleaded for the removal of all restrictions on the marketing of cocoons and the production and sale of silk. The system of buying silk at controlled rates and selling it by public auction at higher rates came in for much criticism. The Dewan explained that the Cocoon Control Order and the Silk Control Order were conceived in the best interests of the sericulturists. Government have no idea of making any profit in this business. The Control Orders aimed at ensuring an adequate and regular supply of silk to the filatures which were engaged on important war orders and at giving a reasonable price to the sericulturists. The surplus realized in auction sales was divided between the rearer, the reeler and a fund which has been formed for the development of the industry. In this matter it is important to bear in mind a few simple facts. At present there is shortage of silk but great civilian demand for it. If the controls are removed, the probability is that all the profit resulting from the gap between demand and supply would go to merchants and middlemen but both the producers and consumers would lose. If the Control Orders had affected the sericulturists adversely, the extent under mulberry cultivation would have undoubtedly shrunk. But the fact is that the mulberry cultivation has greatly expanded even after the Control Orders came into force, and it became necessary for Government to restrict further expansion in the interests of food crops. If the present system needs any modification, it is in the direction of protecting filatures against loss, on the one hand, and of controlling the prices of silk fabrics, on the other.

Cawnpore

Technological Institute Convocation

ADDRESSING the joint Convocation of the H. B. Technological Institute and the Imperial Institute of Sugar Technology, His Excellency Sir Maurice Hallett, Governor of U.P., stressed the importance of scientific and industrial research for improving the agricultural and industrial conditions of the country. "In India," he said "we have natural resources which we have not touched, we have abundant man-power, a huge population, a greater part of which depends on the scanty produce of a small and often badly cultivated agricultural holding." "There are flourishing industries in India," continued His Excellency, "and I think it will be admitted here that in an industrial city such as Cawnpore, the war has made many of these industries even more flourishing. We must see that these industries do not slump after the war, that they produce the consumer goods of which we stand so badly in need and that they are so organized as to raise the standard of living for the whole population not merely so as to increase the income of the few at the top and of those who pay a high rate of income-tax but so as to raise the income of all and to make all free from want in every sense." He also stressed the importance of industrial education. "We must have boys trained in science and industry so that they can play their useful role in the industrial regeneration of the country."

Mr. L. C. Jain, I.C.S., Director of Industries, in his address gave a brief review of the work done by the institutions. He claimed that the Harcourt Butler Technological Institute was the only one of its type in India that has succeeded in the manufacture of rubber substitutes from castor oil and mustard oil on a semi-commercial scale. He also revealed how these and other products were being tested commercially by the rubber factories.

Electrical Development

With a view to properly assessing the scope for developing hydro-electric schemes in the Province, the Government appointed an Expert Committee recently under the chairmanship of Mr. H. M. Mathews, Electrical Commissioner with the Government of India. The Government desired to make available electric energy all over the province at a reasonable cost. Sir William Ibbotson, Adviser to the Governor (Supplies), revealed that the Government have under consideration a five-year plan containing six important irrigation and hydro-electric schemes, the total capital cost of which was estimated at Rs. 24.63 crores. A new area of 4,599,800 acres are likely to be brought under canal irrigation. The total generating capacity of the present hydel-grid is 48,000 kw. and the likely peak capacity of the 5-year hydel schemes is estimated to be 296,250 kw. Six main schemes have been chalked out towards the attainment of the above objective. They are (1) a project for a 600-ft. high dam to provide water storage and power on the Nayar, a tributary of the Ganges, near Lansdowne in Garhwal; (2) a project for producing power from the Sarda Canal near Banbassa; (3) proposals for an increase in power production on the existing hydel system; (4) a project for water storage and power production on the Rihand tributary of the Sone River in the south-east of the province; (5) a joint project with the Punjab for water storage and power production on the Tons and Giri tributaries of the Jumna; (6) possibilities of the Betwa and Ken Rivers in the south-west of the province. It was also revealed that the Government had set apart a sum of Rs. 10 lakhs for exploratory work on these schemes and orders for exploratory machinery had been placed.

Total Rationing

Preparations for the inauguration of complete rationing in U.P. are almost complete. 1st February has been selected for its introduction. Town rationing officers of the 14 districts earmarked for rationing were called for a conference by Mr. Marsh Smith, Secretary to Government, Rationing, when all the details were discussed.

Development Board for Cawnpore

The Government of the U.P. have appointed a Committee with Sir Edward Souter as Chairman, Mr. N. B. Banerji, Secretary, Local Self-Government Department, U.P., as Secretary, Mr. H. S. Stephenson, District Magistrate, Cawnpore, Mr. Cassee, Water Works Expert, and Mr. Tunny Cliffe as Sewage and Drainage Expert, as members, for inquiring into the conditions of Cawnpore, and for suggesting such measures as are to be taken " to ensure that within a reasonable time the city of Cawnpore will be a fit and decent spot to live in. In particular the Committee is to advise as to what administrative machinery should be evolved for this purpose. The recently constituted Board is to have jurisdiction over the Improvement Trust, Municipal Board and Cantonment Board, with full powers to extend administrative control over all areas within 10 miles' limit of the municipal boundary.

Oil Technologists' Association

A new all-India institution called the Oil Technologists' Association has been formed in Cawnpore. Delivering the inaugural address to the first Convention, Sir Padampat Singhania, Governing Director of the J. K. Industries, emphasized that oil technology was going to play a predominant part, as it would be required, not only for human beings but for locomotives, aviation and shipping. Oil will indeed become indispensable in the industrial era—the coming age will be, what we can call the " Oil Age." Sir Padampat regretted that Cawnpore, though an important industrial centre in Northern India, should have no university of its own.

Textile Commissioner for U.P.

The cloth merchants of Cawnpore have formed what is called an " Anti-Cloth-Black-Marketing Committee," and this is having a very favourable reaction as is revealed now that black marketing in cloth has almost been reduced to about half. The committee is carrying on its work with great vigour. The cloth market is composed of half a dozen organizations rival to each other, but it is a very happy sign that in the drive against black marketing all other organizations have combined. The Anti-Cloth Black-Marketing Committee consists of about 25 persons with a separate Executive Committee of five. The Committee is peculiarly constituted and has no office-bearers like President, Vice-President, Secretary and others. But they have " sanctions " behind them and it appears that if anybody persisted in black marketing he might have to face a very unpleasant situation.

Mr. M. K. Vellodi, the Textile Commissioner, paid a four-day visit to Cawnpore and acquainted himself with the cloth market position in the province. He said in an interview that he has recommended to the Provincial Government the advisability of appointing a full time Textile Commissioner for the province who will deal exclusively with the cloth and yarn problems and with the various other control orders affecting the textile trade in the province. The office of the Commissioner will also be located in Cawnpore which is the largest manufacturing and distributing centre of textile goods in the U.P. He said that the object of the cloth and yarn control had been realized to a greater extent than was thought possible in the beginning and the ceiling prices of cloth and yarn had further been scaled down and standard cloth was reaching consumers at the controlled rates.

Indian Mill Finance

Working of Textile Companies

Morarjee Goculdas Spinning and Weaving Co., Ltd., Bombay

(Agents: Ganeshnarayan Piramal)

The profit of the company for the year ended 30th June 1944, without providing for the agents' commission and depreciation, amounts to Rs. 87,88,068-14-9. Deducting therefrom the commission due to the Agents on the year's profit of Rs. 8,78,806-14-3 and the amount taken to the depreciation of buildings, machinery and plant, electric lights, dead stock and motor vehicles, as per balance sheet and profit and loss account of Rs. 4,17,698-8-9, there remains the sum of Rs. 74,91,563-7-9 which together with the balance brought forward from last year's account of Rs. 1,73,138-6-6 makes a total of Rs. 76,64,701-14-3. Having paid out of this amount, an *ad interim* dividend at the rate of Rs. 15 per share for the half-year ended 31st December 1943 on 17,243 shares which absorbed Rs. 2,58,645 and provided for taxation for the year ended 30th June 1944 of Rs. 60,00,000, there is an available balance of Rs. 14,06,056-14-3 from which the directors recommend payment of dividend at the rate of Rs. 10 per share for the half-year ended 30th June 1944 and bonus at the rate of Rs. 10 per share on 17,245 shares for the year ended 30th June 1944, which will absorb Rs. 3,44,900; to carry to the reserve fund Rs. 10,00,000 and carry forward the balance to the next year's accounts Rs. 61,156-14-3.

During the year all the debentures of the company for Rs. 25 lakhs have been paid off excepting nine debentures, which the owners have not yet surrendered for payment.

During the year, the directors have sanctioned the purchase of Green's vertical tube economisers to replace the existing economisers, which have run out their life of useful service. The equipment has not yet arrived.

The mill buildings, plant, machinery and tools, electric light installation, sprinklers and stock and stock-in-process have been insured on 30th June 1944 for Rs. 2,14,55,525 against fire, riot and civil commotion and for Rs. 1,90,36,326 under the War Risks (Factories) Insurance and War Risks (Goods) Insurance Ordinance. The mill profits and standing charges have been insured for Rs. 30,00,000.

Sholapoor Spinning & Weaving Co., Ltd., Sholapur

(Agents: Morarka & Co., Bombay)

During the year ended 31st March, 1944, the profit earned by the company amounts to Rs. 68,96,476-8 including the sum of Rs. 4,82,269-4-2, being the balance of profit brought over from the last year's account.

After making provision for depreciation on buildings Rs. 3,22,380; plant and machinery including dyeing, bleaching and sprinklers Rs. 4,60,026; on dead stock Rs. 10,061; and on Sholapur City Electrification Scheme Rs. 32,633; and provision for taxation for 1943-44 Rs. 50,00,000, a balance of Rs. 10,71,376-8 is left from which the directors recommend a dividend for 12 months ended 31st March 1944 at Rs. 400 per whole share and Rs. 200 per half share free of income-tax Rs. 6,40,000, and a dividend at 3 per cent. on the redeemable cumulative first preference shares, Rs. 50 per share paid up (tax-free) Rs. 48,000. leaving the balance to be carried forward Rs. 3,83,376-8-0.

A, B and C Mills and contents including stock, etc., have been insured against fire, riot and civil commotion risks for Rs. 5,07,63,208. Profits and standing charges have been insured against fire, riot and civil commotion risks for Rs. 40,00,000. Insurance has also been taken under the War Risks (Factories) Insurance and War Risks (Goods) Insurance Ordinances for Rs. 2,45,33,000.

Mohini Mills, Ltd., Kushtia

(Agents : Chakravarti, Sons & Co.)

During the year ended 31st December 1943 the company has made a profit of Rs. 63,78,433-13-4 which with the amount of Rs. 23,971-6-4 brought forward from last year's account makes a total of Rs. 64,02,405-3-8. After deducting Rs. 4,27,660-10-2 as depreciation on the buildings and machinery, etc., there remains for appropriation an available balance of Rs. 59,74,744-9-6 which the directors propose to deal as under :—To declare a dividend at the rate of 25 per cent. on the paid-up capital (free of all taxes) Rs. 3,49,996-4 ; provision for excess profits tax, income-tax, super-tax, corporation tax, compulsory deposit, etc., Rs. 55,50,000; to carry forward to next year's account Rs. 74,748-5-6.

During the year under report irregular supply of coal made it necessary for the management to purchase firewood from the market at a very increased price.

The Mill No. 1 remained closed for three months for want of coal while maintaining all the expenses for the staff and operatives during the period.

During the year under report the 2nd issue of Debenture loan amounting to Rs. 8,50,000 has been fully redeemed and the liability to the Managing Agents has been reduced to Rs. 1,50,000.

The mill properties, buildings, machinery, stocks, etc. (Mill No. 1 and Mill No. 2) are now insured against fire and riot to the extent of Rs. 75,30,700 and for Rs. 43,08,024 under the Government of India for War Risk (Factories) Insurance Ordinance and Rs. 51,00,000 under the War Risk (Goods) Insurance Ordinance.

Raghuvanshi Mills, Ltd., Bombay

(Agents: Ravindra Maganlal & Co., Ltd.)

The profit and loss account of the company for the year ended 31st March 1944 shows a net profit of Rs. 28,67,604-7-1 after writing off a sum of Rs. 67,736-6 for depreciation for the current year, to which is added Rs. 47,897-1-2 being the balance from the last year's profit, making a total of Rs. 29,15,501-8-3. The directors recommend the appropriation of the amount as follows :—Reserve for taxation Rs. 15,00,000; reserve for the reconstruction of buildings, machinery and electrical equipments Rs. 12,80,000; reserve for bad and doubtful debts Rs. 10,000; to payment of a dividend of Rs. 12 per share free of income-tax Rs. 1,20,000; balance to be carried forward Rs. 5,501-8-3.

The directors regret to report the serious and disastrous fire that destroyed the main portion of the mill on 18th January 1944. In spite of the strenuous efforts of the Municipal Fire Brigade and others, the fire could not be brought under control till the whole of the spinning department was destroyed. The mill, therefore, worked only for 9 months 17½ days during the year and since the day of the fire, it has completely stopped working.

As the property was insured, claims were made with all the companies for loss due to fire as well as for consequential loss for which also the company has insured. After due survey, the loss due to fire on building, machinery and stock and stock-in-trade was settled.

On 4th July 1944, there was another sudden fire in the power house of the mill at about 5 a.m. when the mill was closed. The power house equipment was seriously damaged.

In order to make efforts to reconstruct the mill, the Managing Agents approached the authorities and with their help the great task of reconstruction is progressing quite satisfactorily

The company's property comprising the existing buildings, machinery, stores and stocks is insured against loss by fire (silent risk) and risks arising out of riots and civil commotion. Adequate insurance also has been provided for, under War Risks (Factories) Insurance and War Risks (Goods) Insurance and also Workmen's Compensation Insurance.

Barsi Spinning and Weaving Mills, Ltd., Barsi

(Agents: Desai Arwade Ltd., Bombay)

The result of the working of the company for the year ended 31st December 1943 shows a net profit of Rs. 4,45,256-6-4 after deducting Rs. 98,000 for depreciation of the mill buildings, machinery and furniture. This, with the addition of the balance of profit of Rs. 2,056-1-4 of the last year as carried forward from the last year's balance sheet brings the total credit balance to Rs. 4,47,312-7-8. Out of this amount the following appropriation has been made :—Provision for taxes Rs. 3,50,000; bonus to the staff Rs. 7,500 and charity Rs. 3,000.

This leaves a balance of Rs. 86,812-7-8, out of which the directors recommend the payment of 19th dividend at 12 per cent., i.e., Rs. 30 per share (free of income-tax). Out of the same Rs. 15 per share have already been paid as interim dividend and that leaves the final dividend to be distributed at Rs. 15 per share. This will absorb Rs. 69,030, and will leave a balance of Rs. 17,782-7-8 to be carried forward to the next year's account.

The mill machinery, buildings, stores and stock-in-trade are insured for Rs. 31,18,250 and for war risk insurance for Rs. 22,45,343, as required by law.

Aurungabad Mills, Ltd., Aurangabad

(Agents: Doraswamy Iyer & Co., Bombay)

The profit and loss account for the year ending 31st December 1943 shows a profit of Rs. 11,74,095-13 which together with Rs. 4,158-9-8 brought forward from the last year's account makes a total of Rs. 11,78,254-6-8. This amount is subject to provision being made for excess profits tax including deposit payable under the Hyderabad Excess Profits Tax Act and the Directors have made a lump sum provision of Rs. 9,50,000 in respect of this liability. Out of the balance left, namely, Rs. 2,28,254-6-8 the directors propose to make the following provisions:—To debenture redemption fund Rs. 35,000; to depreciation fund Rs. 16,000; to declare a dividend at the rate of Rs. 60 and a bonus at the rate of Rs. 65 per share on the old 646 shares of Rs. 1,000 each Rs. 80,750; to declare a dividend at the rate of Rs. 45 and a bonus at the rate of Rs. 48-12 per share on the remaining 554 shares of Rs. 1,000 each issued in April 1943 Rs. 51,937-8 and to carry forward to the next year's account Rs. 44,566-14-8.

A small fire occurred in the mills, on 28th May 1943 which resulted in the complete loss of the gin-house and 16 gins therein. The insurance company paid the claim which amounted to Rs. 10,306-9-0.

The company's properties have been insured against fire inclusive of all riot risks for the total sum of Rs. 38,04,900 and also against loss of profit and standing charges for the sums of Rs. 8,00,000 and Rs. 5,50,000 respectively covering indemnity for 24 months. The usual war risk insurances as per Government regulations have also been effected.

Raja Bahadur Motilal Poona Mills, Ltd., Poona

(Agents: Mukundlal Bansilal & Sons, Bombay)

The result of the working of the company for the year ended 31st December 1943 shows a gross profit of Rs. 21,68,592-1-3 to which is added the last year's balance of Rs. 1,48,890-8-11. Deducting therefrom the amounts allotted for depreciation of Rs. 2,50,000; Managing Agents' commission Rs. 1,91,859; provision for taxation Rs. 14,75,000 and interim dividend Rs. 1,12,840 there remains a sum of Rs. 2,87,783-10-2 which the directors propose to appropriate as under :—Final dividend free of income-tax on 28,210 shares at 3 per cent. Rs. 84,630 leaving a balance of Rs. 2,03,153-10-2 to be carried forward to meet the compulsory deposit under the Finance Act.

On account of heavy fire which broke out at the Mills on 7th May 1943, the working of the mills was affected considerably and about 120 looms were rendered unworkable. Reconstruction of weaving shed and putting the looms in working order could not be done early on account of various war-time restrictions and transport difficulties, etc. But the work has been taken in hand already and it is hoped that the same would be completed at an early date.

Buildings, machinery, stocks and stock-in-process and profits of the company, are fully insured.

NEWS OF THE MONTH

Indian

The Moon Mills Ltd.: Change of Address.—From 27th November 1944 the office of the Moon Mills Ltd. has been shifted to the General Assurance Building, 2nd Floor, Hornby Road, Bombay. Their telephone No. is 28078.

Tamarind Seed and Tapioca Starch for Sale.—Mr. K. A. Davies, B.A., B.L., general merchant and commission agent, Trichur, offers for sale large quantities of tamarind seed, tapioca starch, tapioca sago and tapioca flakes. Those interested in these lines may get into touch with him.

India and U.N.R.R.A.—It is learnt that the Government of India propose to contribute Rs. 6,00,00,000 towards the funds of U.N.R.R.A. It is understood that Sir Azizul Haque, the Commerce Member, discussed the matter recently at a conference of party leaders of the Assembly.

Bombay Working Class Cost of Living Index.—During October 1944 the working class cost of living index number for Bombay, with the average prices for the year ended June 1934, equal to 100, was 239. This was the same as in the preceding month. The index number for food articles advanced by one point to 271.

Industrial Disputes in Bombay Province.—During September 1944, there were 17 industrial disputes in Bombay Province—10 in Bombay, two at Ahmedabad and one each at Surat, Sholapur, Dholka and Chembur and Parle-Andheri, in Bombay Suburban District. The number of workpeople involved in these disputes was 15,990 and 30,367 working days were lost.

Jute Purchasing Panel in Calcutta.—The Government of India have decided to set up at once in Calcutta a Jute Purchasing Panel which will be charged with the duty of buying on behalf of the Central Government raw jute to an extent which will support the jute market, at a figure not below the guaranteed minimum prices notified in the Department of Commerce notification dated 5th April 1944.

Textile Calendar

NOVEMBER

28th, Tuesday :
All-India Manufacturers' Organization, Third Quarterly Meeting of Central Committee.

29th, Wednesday :
Maharashtra Chamber of Commerce, Bombay, Annual General Meeting.

30th, Thursday :
Textile Control Board meets in Bombay.

DECEMBER

8th & 9th, Friday & Saturday :
Indian Chemical Manufacturers' Association, Sixth Annual Meeting, Calcutta.

13th & 14th, Wednesday & Thursday :
Conference of Provincial Textile Controllers in Bombay, Mr. M. K. Vellodi presiding.

14th, Thursday :
Associated Chambers of Commerce Annual Meeting, Calcutta.

15th, Friday :
12th Ordinary General Meeting of the Karachi Cotton Association, Ltd., Karachi.

18th, Monday :
Employers' Federation of India, Annual General Meeting, Bombay.

21st, Thursday :
Textile Association (India) : Lecture by Mr. B. B. Joshi, L.T.M. (Hons.), Additional Controller, Raw Materials and Stores, on "the Report of the U.K. Textile Mission to America and its Implications," the Podar College of Commerce, Bombay.

FEBRUARY 1945

8th, Monday :
Budget Session of Indian Legislative Assembly meets in New Delhi.

27th & 28th :
Second All-India Textile Conference, Bombay.

MARCH

1st & 2nd, Thursday & Friday :
Second All-India Textile Conference, Bombay.

Occupational Institutes for Demobilized Soldiers.—A scheme to set up six occupational institutes in the United Provinces to place demobilized Army personnel and others in independent small-scale occupations and as skilled workers in factories is stated to be an important item in the five-year post-war development plan being examined by the U. P. Government. The plan will involve an expenditure of over Rs. 60 lakhs.

Workers Injured by Collapse of Weaving Shed.—Sixteen labourers of a weaving depot in Kodambakkam, Madras, were injured when a shed in which they were working collapsed at about noon on 29th November. Five of them, all women, have been admitted as inpatients into the Royapettah Hospital while the rest were treated as outpatients. First aid was rendered to the injured by the police and men of an A.R.P. rescue party.

Mill Manager and Labour Officer Assaulted by Workers.—It is reported that Mr. S. J. Bose, Manager of the Jam Mills No. 1, Bombay, and Mr. R. G. Gokhale, Labour Officer, Millowners' Association, Bombay, were seriously assaulted by rowdy millhands on the 12th instant and had to be removed to hospital. It appears that the trouble in the mill arose over a proposal to start night shifts and to effect certain changes in regard to recruitment of workers.

Rs. 50 Lakhs for Industrial Research : Travancore Dewan's Announcement.—Sir C. P. Ramaswami Aiyar, Dewan of Travancore, and Vice-Chancellor, Travancore University, delivering the inaugural address at the first meeting of the Travancore University Research Association in the Victoria Jubilee Town Hall, announced that the Travancore Government were setting apart a sum of Rs. 50 lakhs for purposes of research, which figure would be doubled if necessary.

Bonus for Bombay Mill-workers.—About 220,000 cotton mill-workers in Bombay City will get a bonus equal to one-sixth of their total earnings, exclusive of their dearness allowance, for 1944. The bonus, which will be on the same terms as those for the preceding year, will be paid in two instalments, one payable on 20th January 1945 and the other on 24th March. The payment of bonus will cost the industry an additional expense of about Rs. 125 lakhs, representing two months' bill for wages.

Simplex Mills, Bombay, Declare "Ad-Interim" Dividend.—The Board of Directors of the Simplex Mills Co., Ltd., Bombay, have declared an *ad interim* dividend for the half-year ended 30th September, 1944 at the rate of Rs. 4 per fully paid and consolidated Share of Rs. 50 each (free of income tax). The dividend will be made payable at the Chartered Bank of India, Australia and China, Bombay, on and after Monday, the 15th January, 1945 to those shareholders holding fully paid and consolidated shares of Rs. 50 each.

Lancashire Second-hand Textile Machinery: Purchase by Indian Mills.—It is reported in Manchester that representatives of Indian cotton mill interests are negotiating purchase of second-hand textile machinery in Lancashire. A few weeks ago, nearly 20,000 ring spindles were taken from a mill for shipment to India. The machinery is packed and waiting for Government permit for export. The same representatives are negotiating for ring spindles in a mill closed under the concentration production scheme, but there is some difficulty in arranging the price. These developments are causing some concern among Lancashire traders.

Revised Export Advisory Council.—A resolution of the Government of India published in the *Gazette of India* recently announced the revised composition of the Export Advisory Council which was originally set up by the Department of Commerce in 1940, says a Press Note. Raw cotton and textiles interests will hereafter be represented by members nominated by the Textile Control Board instead of by nominees of the Bombay and Ahmedabad Millowners' Associations and the East India Cotton Association. The number of seats to be filled by direct nomination by the Government of India has been increased to 12 to provide for the representation of interests not otherwise adequately represented on the Council.

Proposal to Form an Indian Institute of Art in Industry.—It is proposed to form next year an Indian Institute of Art in Industry which, it is hoped, will become the show-window of India's most attractive wares, said Mr. Henry Born, General Secretary of the Art in Industry Exhibition speaking on "Art and industry" at a meeting of the Rotary Club of Calcutta. Mr. Born added that the Institute would also have representatives abroad and would issue many publications concerned with world progress in all aspects of applied art, including interior decoration. The Institute would have a staff of experts for giving advanced training to students, and a small group of designers would be available to give advice to industry.

Indian Scientific Office in London.—A permanent Indian scientific office in London, which will cement and maintain the relations established during their present visit to Britain is planned by the party of Indian scientists who were recently in England as that country's guests.

It is understood that the organization may be a nucleus from which will grow a complete organization acting in liaison with India for the purpose of collaboration and mutual assistance in British-Indian trade and scientific problems. The organization, in the first instance, is likely to consist of a director and a small executive staff. It would be one of the duties of the office to co-operate with official and other quarters in England in arrangements for graduate students in scientific, medical and other professions when they go to England for training.

Health Insurance Scheme Being Expedited.—Consideration of the health insurance scheme for industrial workers, prepared by Dr. B. P. Adarkar, is now being expedited by the Government of India. Views of provincial Governments and employers' and employees' associations are being invited, and these will be discussed at a tripartite meeting of the next Standing Labour Committee. Consequent on this discussion, a draft legislation will be prepared and circulated for comments.

The Government of India, it is further learnt, have approached the International Labour Office, asking them to send out an expert on social insurance. The expert is expected to arrive in India after a preliminary examination of Prof. Adarkar's scheme is made, and will stay on to participate in the discussions at the tripartite meeting.

Import of Woollen Goods and Serge From U. K.—Mr. C. C. Desai, Controller-General of Civil Supplies, Government of India, told merchants in Lucknow that fresh supplies of radio sets, fountain pens, stationery, watches and silk goods, the supply of which is inadequate, would arrive soon.

Mr. Desai said that the position regarding woollen cloth, bicycles and photographic goods was rather critical. Owing to shortage of those goods, the Government distributed them to various provinces on the basis of population according to the last census.

The Government had expected to release 25 per cent. of the woollen goods manufactured in India for civilian use but could not do so in the current cold weather. He hoped that a large quantity of Indian woollen goods would be available early next year. A "tremendous" amount of serge would be received in this country from the United Kingdom in 1945.

Raymond Woollen Mills Ltd. Sold.—The Raymond Woollen Mills, Ltd., Thana, one of the few well-equipped units of the Indian woollen industry, has changed hands. Messrs. E. D. Sassoon & Co., Ltd., Bombay who controlled the mill for the past 19 years, have transferred the managing agency to the J. K. Industries of Cawnpore for a sum of about Rs. 70 lakhs. The deal has been completed between Sir Victor Sassoon, Bart., on behalf of E. D. Sassoon & Co., Ltd., and Mr. Kailaspat Singhania, representing the J. K. Group and it takes effect from 1st December 1944.

The mill, which was originally known as the Wadia Woollen Mills, Ltd., was acquired by E. D. Sassoon & Co., Ltd. in 1925 and renovated. It is situated at Thana near Bombay and is equipped with 17,300 woollen spindles (2,880 mule, 10,400 ring and 4,020 doubling), 268 looms and also bleaching, dyeing and finishing plant and is entirely on war orders for defence services since the present war started.

British Interest in Indian Industrialization.—Whatever plan there was for the industrialization of India should be put into operation before the end of the war, declared Sir Miles Thomas, the motor manufacturer, in his second broadcast from London on industrial development. To implement this plan, he suggested the setting up of a joint industrial board consisting of representatives of the Government of India and those running factories at present as well as those who would be running them in peace-time.

In Sir Miles's opinion, the picture of India is most encouraging, possessing plenty of labour, much of it with an inbred mechanical sympathy, a good supply of raw materials, the possibility of developing low-priced hydro-electric power on a widespread scale, and a market big enough to take advantage of the most modern methods.

He suggested that some engineering administrators from Britain or elsewhere go to India to do broad-scale planning and organization.

Textiles in the Central Assembly.—Answering questions in the Central Legislative Assembly at New Delhi on 15th November the Commerce Member, Sir Azizul Haque, said that of the total production of Indian mills the proportion of standard cloth was 14.7 per cent. in 1943-44 and 8 per cent. in 1944-45. Sir Azizul Haque refused to share the apprehensions of Sir Zia-ud-Din Ahmed on the outlook for the handloom weavers.

The Commerce Member revealed that, while the handloom weavers were obtaining yarn at greatly reduced controlled prices, the Government had imposed no control on the price of their products.

Sir Azizul Haque also stated that the output of India's cloth was 6,300 million yards this year and he hoped next year would show an additional output of some 200 million yards. About 1,500 million yards of this constituted handloom cloth, while not more than 900 million yards were produced for the Defence Services.

Mr. T. T. Krishnamachari inquired suavely whether textile smuggling took place in any Indian State. The Commerce Member replied that he was not in a position to answer the question.

Mr. Krishnamachari also felt that with only two representatives among a total of 25 the consumers were under-represented on Textile Control Board.

Development of Electric Supply: Government to Set up Central Board.—The Government of India have decided to constitute a Central Technical Power Board which will act as a central planning organization and will advise the Central, Provincial and State Governments as regards encouraging, planning and pressing forward the widespread development of public electricity supply throughout the country, says a Press Note.

A resolution published in the *Gazette of India Extraordinary* says that " the Board will be a strong technical organization designed to collect ideas, conduct surveys and prepare and outline schemes for electrical development in consultation with Provincial and State Governments."

The basic function of the Board will be to collect material relating to power resources and study and plan schemes for power utilization so as to bring about improvement in the national economy, particularly in those zones where the scope for the development of electricity supply seems to be promising but where no active planning appears to be in hand. Thus, in consultation with the Provincial or State Governments, it will undertake investigations, conduct surveys, prepare " technical schemes " and supply an appreciation of the effect of the scheme on the general economy of the region. The results of the surveys, planning and estimates will form a " project report."

Foreign

World Trade Union Conference.—The World Trade Union Conference will be held from 6th to 16th February 1945. A preparatory committee, comprising representatives of the British, Soviet and American trades unions, met the other day in London.

Setting up Industrial Design Centres in England.—Opening an exhibition of textile designs in Manchester recently arranged by the Cotton Board, Sir Thomas Barlow, Director-General of Civilian Clothing, announced that it was proposed by the Government that a council should be appointed for the purpose of encouraging art in industry. One of the Council's aims would be to improve the design of everyday articles, and the proposals

ALL-INDIA TEXTILE CONFERENCE

SECOND SESSION 1945

Organised by THE TEXTILE ASSOCIATION (India), Bombay

27th & 28th FEBRUARY and 1st & 2nd MARCH 1945
at the V. J. T. Institute Grounds, Matunga, BOMBAY

EXHIBITION: COMMERCIAL and TECHNICAL

CHARGES: For Members of the Reception Committee Rs. 15/- each. For Delegates (Reserved accommodation) Rs. 8/- each ; For Delegates Rs. 3/- each ; Students of Technical Institutions Re. 1/- each ; Lady delegates Rs. 3/-.

Tickets available from the Office of the Textile Association (India), " Ganesh Bhuvan" Suparibaug Road, Parel, Bombay 12.

The Conference is open to all interested in the textile industry and will offer opportunities for delegates from all over India to meet one another and discuss problems affecting everyone.

included the setting up of industrial design centres by different industries. The Board of Education would be encouraged to provide industrial art training with scholarships for students at home and abroad.

An Extension of Price Control of Cotton Piecegoods in Australia.—Maximum wholesale and retail prices for 48 lines of cotton piecegoods, imported from the United Kingdom, have been gazetted in Australia. This is a further instalment of a plan to gazette uniform maximum prices of all piecegoods in common use and is an extension of the range of cotton piecegoods which are now subject to specific maximum prices.

Some hundreds of lines of Indian piecegoods were similarly gazetted last May and were of the same type as utility cotton piecegoods manufactured to official specifications for domestic use in the United Kingdom.

Belgian Cotton Mills Start Production.—It appears that Belgian textile mills will be able to start production for relief purposes fairly soon. Limited quantities of cotton and wool have been allocated to Belgium by U.N.R.R.A., and the Belgian Government believes that in the reasonably near future it may be able to resume commercial imports of textile raw materials on a limited scale. The latest reports from official Belgian sources confirm earlier suggestions that the country's textile mills have not been very badly damaged and that in spite of the forced transfer of workers to Germany, the Belgian textile labour supply position is not unduly serious. The supply of textile raw materials accordingly seems to be the main preliminary to the resumption of production.

Clothing and Textile Advisory Council in Australia.—The Federal Clothing and Textile Advisory Council has been constituted to advise the several Government agencies regarding the importation and distribution of textiles for Australia. The Council was constituted by the Associated Chambers of Commerce and Chambers of Manufacturers in all States. It assists and advises the various Government Departments by having matters of interest to the trade generally channelled through the Council. By this means individual members of the chambers concerned and representatives of the trade generally are able to make a united approach to Government officers.

In practice it has been found that recommendations and complaints can be co-ordinated and extraneous matters eliminated by the Council before they are brought to Governmental notice.

The Council is consulted by the Government agencies for trade opinions as to quality and price of textiles when considered necessary.

Egyptian Cotton Position.—Egypt's cotton season, which opened a couple of months ago, is marked by reluctance on the part of the usual buyers. This is attributed to three major factors. They are (1) the large stock of 9,000,000 *kantars* (approximately 100 pounds per *kantar*) carried over in August; (2) a larger estimated crop of between 4,500,000 and 5,000,000 *kantars* as compared with 3,500,000 last year and (3) closer restrictions than ever on export to consumer countries.

In fact, India remains the only real importer, and, even so, Indian buyers are free to buy on the open market only after the recently created Cotton Co-ordinating Commission has effected its cotton purchases for the United Kingdom as well as part of India's requirements and possibly cotton the United Nations may wish to send into liberated Europe.

As far as is known, the Co-ordinating Commission has been on the market only twice to buy some small quantities of Karnak and Giza varieties at bargain prices.

There is as yet nothing definite on American purchases. The question has been discussed with the U. S. Economic mission at present visiting Egypt, but no decision can be forthcoming until it has submitted its report to the United States Government.

Plan to Restart Spinning Mills Closed in 1941 in England.—The first meeting of the Committee established under the chairmanship of Sir Raymond Streat, Chairman of the Cotton Board in England to consider and report upon the problems of deconcentration in the spinning section of the cotton industry was held recently in the offices of the Cotton Board. In addition to the Chairman all the members of the Committee were present, these being: Messrs. H. S. Butterworth, J. R. Fitton, J. Lindey, A. N. Redford, T. L. Taylor, and G. H. Whitehead. The meeting was devoted to a survey of the various aspects of the problem with which the Committee will have to deal and to deciding upon the general procedure to be followed. Frequent further meetings will be held in the near future, but it is not intended to issue statements for publication until the Committee's final report is ready, when the first step will be to make its recommendations known to the industry. About 180 mills containing 15,000,000 spindles, or one-third of the industry, were stopped in 1941, and it is estimated that about 40,000 operatives will be required to restart these mills.

Moves are taking place behind the scenes for amalgamations of some spinning companies after the war. It is possible that some of the closed mills may form a nucleus of two or three combines though before anything definite is done shareholders of these companies will have to be consulted. There are rumours of one or two leaders of the trade being the prime movers in future combines.

Fifty Years Ago

(From the *Indian Textile Journal*, December 1894)

Shareholders' Association Wanted

"Until shareholders take a more active interest in the management of their investments, they will continue to be victimized by unscrupulous managements. Has it never occurred to them to form a small society for the protection of their interests? A very moderate subscription would enable them to get good advice and to organize their investigations, taking one mill at a time. There is no other body whose business it is to interfere with the disorders in the cotton industry and the mere existence of the Shareholders' Association, apart from its legitimate work, would be a wholesome terror to those who are said to have at present got such a hold upon the cotton trade."

Indian Textile Journal

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Founded by SORABJI M. RUTNAGUR

55 th Year

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EDITORIAL

Taking Stock

THE advent of the new year gives us, as usual, an opportunity to take stock of the situation as it affects the raw cotton and cotton textile industries. The supply of Indian cotton during the season 1943-44 has been estimated at 8,325,000 bales, it being made up of 2,875,000 bales carried over from the previous season and 5,450,000 bales of current production. Indian mills absorbed 4,125,000 bales, the usual extras for hand-spinning, etc., accounted for 350,000 bales, and nearly 300,000 bales were exported, leaving a balance of 3,550,000 bales. Of this balance, 275,000 bales are reported to be with the Government of India, about 1,600,000 bales represent mill stocks and 1,675,000 bales stocks lying undistributed with the trade. In the current season, assuming that Government efforts at curtailing cotton production continue to bear fruit and that they result in an acreage reduction of 10—15 per cent. —actually the first forecast estimates reveal a reduction of 24 per cent.—a crop of 4,500,000 bales may be expected, and together with the carry-over the total supply may amount to 8,050,000 bales. In view of the possibilities of increased textile production, Indian mills are expected to consume about 125,000 bales more than in the last season. The launching of a subsidized export programme by the U.S.A. for American cotton is being viewed in the gravest light and Indian exports in the current season may not exceed 600,000 bales. Taking the usual figure of 350,000 bales for extra factory consumption, the distribution of Indian cotton in the current season is placed at about 5,200,000 bales, leaving a carry-over of 2,850,000 bales at the end of the season.

As to cotton manufactures, their production was considerably accelerated last year. Roughly, the total supply available to the internal market before the war was 6,000 million yards. The mills and the handlooms produced nearly 6,800 million yards last year, but exports accounted for nearly 600 million yards and Defence requirements for nearly 900 million yards, both having been absent in the pre-war years. The stoppage of imports and substantial rise in exports and Defence demands have together combined to render even the increased output of 6,800 million yards inadequate to clothe the civilian population. The Commerce Member of the Government of India recently expressed the hope that it might be possible to step up production by another 200 million yards if the coal situation became easier. We have before now drawn our readers' attention to the precarious coal situation. The stoppage of certain mills during the year was avoided only by the switching over by Government of 30,000 tons, held by Bombay mills as a stand-by against any contingency arising out of a breakdown in supplies of fuel oil, for use by mills in and around Bombay; as if to remind us that the trouble is not over we now hear that mills in Ahmedabad, Sholapur, Indore and elsewhere are being closed down for want of coal. Indian mills require about 180,000 tons annually, but they have to carry on with a supply of 150,000 tons. The problem of coal raisings and transport to mill centres has been seriously engaging the attention of the Government of India. They have appointed a Coal Control Board and a Coal Commissioner, but there is a general feeling that the Board has not been meeting often enough and a vague misgiving as to whether all is well with the Coal Commissioner's assignment of priorities. Although more could perhaps be done to attract mining labour to the fields, there would appear to be no immediate remedy for shortage unless Government arrange to import coal from South Africa, as was being done before the war.

Official control of the textile industry has been attended with varying degrees of success in the spheres of production (which we have dealt with already), prices and distribution. Prices have gone down very considerably from the peak levels of 1943 and are to-day less than 250 per cent.

of the pre-control rates, this being held justifiable on account of the increased costs of production. A further reduction of 5 per cent. in the prices of cloth manufactured with warp counts 50s and under and of 6¼ per cent. in the ceiling prices of specified yarns has been announced to take effect from 1st February 1945. Against a background of decreasing margins the cotton mills in India have been puttingforth their best effortsto co-operate with Government, and it has been officially recognized that the cost of production figures submitted by them are by no means exaggerated; we are informed that no mill is making a profit of 20 per cent., as alleged, and that several are making no more than 7½ per cent. If that is so, it is hard to understand the complaint of the dealers that the present margins leave little to the trade and their request that an addition of about 2½ per cent. to the present prices might make cloth business profitable once again and put an end to black markets. But the authorities have turned down this request as being ridiculous in the context of the prevailing rates, which are higher than the control rates, not by 2½ or 5 per cent., but by as much as 50 or 60 per cent.

Distribution, however, has always been the weakest spot in the control scheme. For several months after the introduction of control a certain section of the industry continued to distribute its production through channels created during war-time in order to defeat the operation of the excess profits tax, and the dealers who had to buy through these channels found that business was not possible except on payment of black market prices. The mills were directed, therefore, to sell their products only to dealers who were in the trade in the years 1940-41-42. Following on this, the Government of India took over two of the Bombay mills and controlled, through the medium of a number of approved shops, the distribution of the products turned out by 12 mills in the provinces of Bombay and Madras. Other drastic measures were also taken, including the cancellation of the licences of several offending dealers. But it would appear that the effect of this shock has been wearing off and black market activities have again been prominent. A zonal scheme of distribution on *per capita* basis through dealers authorized by permits to despatch goods from manufacturing to consuming centres and a system of notifying provincial authorities particulars regarding consignments so despatched were evolved as a temporary measure, but black markets continued to flourish. An official warning was therefore given ; if black markets persisted after 31st January 1945 despite everything that Government could do, they would not hesitate to " wipe out " the offending sections of the trade, and make their own arrangements, whether through an extension of the approved shop system, or through co-operative societies, or through other means, for the effective distribution of cotton piecegoods in adequate volume and at reasonable prices. Accordingly, the Cotton Cloth and Yarn (Control) Order, 1943, was recently amended giving the Textile Commissioner very wide powers to direct distribution along specified channels. An order was subsequently issued under these new powers, directing quota-holders in Bombay City and suburbs not to sell or deliver any cloth or yarn purchased directly from a manufacturer or to open any such bale except on the Textile Commissioner's orders. A serious source of leakage into the black market was taken, therefore, to have been blocked, the disposal of available supplies, so far at any rate as Bombay was concerned, no longer being vested in the distributing trade. Dealers, on the other hand, who are unable to deliver cloth or yarn when so directed automatically betray themselves as black market men. Moreover, they cannot non-co-operate with Government by refusing to take delivery from the mills, for, if they do so, their quotas will be cancelled for the future. To crown all, at the latest meeting of the Textile Control Board, its Chairman announced that an entirely new scheme of central distribution of cloth has been agreed upon between the representatives of Government and the industry; providing as it does for central direction and co-ordinated provincial action it is expected to show better results than before. These measures appear to be quite comprehensive, but it is too early yet to make any comment on their effectiveness.

Platt Report and Lancashire Machinery

Reactions to the Report of the Cotton Textile Mission to the U.S.A.

BY T. MALONEY, M.C., A.M.C.T.

(Specially Contributed)

By now quite a number of cotton men in India must have seen and read the White Paper, popularly known as the "Platt Report," setting out the facts ascertained and tentative conclusions reached as a result of the Lancashire Cotton Mission's recent visit to the United States of America. The document has caused more than a little stir in cotton textile circles and the report and correspondence arising from it have had very wide publicity in the British Press. It must by now be almost a "best-seller" and it is in fact a most valuable report, no matter how loudly bodies or individuals may endeavour to explain away portions of it which are unpalatable to them. It has many lessons for Lancashire, but perhaps just as many for India and other important cotton textile producing countries, and the facts it contains will repay careful study by all senior responsible officers in cotton mills.*

The Report has also equally valuable lessons for the leaders of the Trade Union movement, Government officials whose work brings them into close contact with the industry, and the distributors of cotton goods. The following pages contain an analysis of the findings and recommendations of the Report and a vindication of British textile machinery drawn up by Mr. T. Maloney, M.C., A.M.C.T., after a personal visit to the more important of the British textile machinery plants. Having been connected with the cotton mill industry in India for over twenty years in the capacity of Secretary of the Millowners' Association, Bombay, Mr. Maloney writes with a special authority and inside knowledge of the subject.

IF I were asked to give the reason why the Report has caused so much discussion and heat I would say that it was due mainly to a little over-emphasis, but, after all the Lancashire man usually calls a spade a spade and many of the critics of the Report's conclusions apparently overlook the very limited character of the Mission's terms of reference.

Terms of Reference

All that the Mission was asked to do was to investigate and report on the methods used in the cotton industry in the U.S.A. and to advise on any changes in method which could usefully be made in England to increase production without a further call on man-power. At the very opening of the Report it is made clear that costs of production were not taken into consideration and that the Mission confined its investigation to production per man-hour and, in reading it, the foregoing statement should always be borne in mind. It is quite true that in places the members of the Mission appear to have been rather carried away by their enthusiasm; but that is perhaps understandable when one considers the magnitude of some of the differences in man-hour output which they found at the various stages and in certain processes of manufacture. In fairness to the Mission it should perhaps be said that the factors accounting for differences in output standards between the United Kingdom and the United States were touched upon; it was never stated in the Report that a slavish imitation of American methods would be possible or advisable in Lancashire, and it was never said that what has been achieved in the realm of output per man-hour in America could be reached in Lancashire within a reasonable space of time. As with Lancashire, so with India, the essential special characteristics of a country's particular trade, the system of organization of the industry, the type of markets it seeks to supply, the type, volume and remuneration of the labour it has to employ, the selling organization through which operations are conducted, financial resources, prices of various types of machinery, incidence of taxation, feasibility of shift-working, access to markets, attitude of labour to rationalization, and many other almost equally important factors, must all be taken into consideration and will have important influence on the type of machinery to be used and its layout.

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*Please see the *Indian Textile Journal*, December 1944, page 148.

Most of these influences on the possibility or advisability of a large-scale change over to standardized products and a complete rationalization with the object of increasing output per operative to the highest possible are touched on briefly in the Report itself, but a casual reading of it has in some cases had the effect of unwarranted conclusions being drawn by both mill men and the Press.

Misleading Conclusions Drawn from the Report

The *Daily Mail* of 4th December 1944, referring to a speech by the Rt. Hon'ble Mr. Herbert Morrison, reports him as saying: "The Report of the 'Platt Mission' which examined the American industry and compared it with the British is a dreadful warning. The American industry is fully equipped with the best up-to-date machinery; the British has altered little in 30 or 40 years." The *Manchester Guardian*, in a slightly longer reference to the Home Secretary's speech, quotes him as saying: "We have an evil legacy in the shape of several great basic industries whose organization and outlook go back to an earlier period and are quite inadequate for the needs of the day . . . the Report of the Platt Mission . . . is a dreadful warning . . . . The British industry has altered little in structure during the last 30 or 40 years and in equipment lags a long way behind the American . . . The causes of the difference lie not only in the installation and use of machinery but in the way the industry is split up into separate sections all the way from the spinning to the marketing of cloth." In the first place it is quite wrong to conclude—if Mr. Morrison so intended—that the whole of the blame for the present poor position of the Lancashire industry can be laid wholly at the doors of the employers, and the sectional organization of the industry. Labour, working through its trade unions has generally resisted with great fierceness attempts to introduce innovations and rationalization or has demanded wage concessions which have ruled them out as economic propositions. It has up to now been to a great extent a matter of r.a.p. whether a particular innovation is worth while when the final product has to find a market in competition with that of another country in an overseas market. With due respect to the Home Secretary I maintain that the "Platt Report" never intended to convey that output per man-hour could be brought up to "maximum" levels in England—the optimum levels in England would in any case differ from those in U.S.A.—without an entirely new orientation in the attitude of labour to innovations, standardization, rationalization, shift-working and other important factors which contribute to the economic value and well-being of a large-scale industry. Another impression which has gained some credence in the mind of the man in the street and perhaps in the minds of some mill authorities in India, to judge from a letter I received a few days ago, is that the Report had stressed the superiority of American machinery over British. The Report certainly does point out that, taken as a whole, the average mill in the United States has more modern machinery than a Lancashire mill, and that nearly all mills have high drafting, and use bigger packages, and more automatic machinery, but it would be a grave error to conclude from this that American-made cotton textile machinery is superior to what is available for purchase in England.

To satisfy myself on this point I have recently visited some of the largest textile machinery plants in England and as a result am convinced that, excellent as are the American machines and innovations dealt with in the "Platt Report," equally excellent machines and innovations have been and are being manufactured in England to-day.

In view of the fact that the existing textile machinery in India is very largely of British manufacture and that a change-over to American or other machinery, except after the fullest possible investigation, would be likely to create considerable difficulties, I will deal briefly with some of the American improvements mentioned in the Report and indicate the British equivalents available.

Blowing Room Machinery

The Report refers to the intensive use of blending hopper bale openers followed by large-scale hoppers for blending purposes. There is nothing very new in this practice. Blending hopper bale openers have been manufactured in England for many years and single process is now standard practice with English machinery makers. Where it is not installed it is because the customer prefers the two-process system. The actual sequence of machines making up the unit depends upon the type of cotton treated.

A seven-cleaning point unit would probably be advisable for dirty Indian cottons: a six-cleaning point for better Indian and low American cottons: a five-cleaning point unit for good American cottons: a four-cleaning point unit for Egyptian cottons and a three-cleaning point unit for the best qualities of Egyptian and Sea Island cottons.

Almost every machine in a single process lapping unit has been improved in some way during the last few years and dust extractors and pneumatic arrangements employed to-day are far in advance of anything previously used for the extraction of light dust from cotton.

Twin Combers.—These machines have been made in England for a number of years but it is doubtful whether there is any advantage in the use of the twin comber over the single comber except in the matter of floor space occupied.

Lap Forming.—Machines of exactly the same type as those referred to in the "Platt Report" are manufactured in England to-day and will probably be used more extensively in conjunction with lap drawing frames in British mills in future for the production of standard qualities of yarn.

Lap Drawing Frames.—Machines similar to those used in the U.S.A. are also made by English textile machinery makers in England. The advantages claimed for the controlled lap drawing system are that each lap is identical in weight and length, exactly filling one can of 12-14 lbs. capacity free from pieces and thick and thin places. The regularity of the card slivers is thus preserved and higher efficiency in the drawing process is obtained owing to longer running and freedom from stoppages. Power consumption, labour employed and floor space occupied are also less than with the older systems of drawing.

High Drafting in Card Rooms.—The high draft speed frame has been made in England for a number of years and is recognized as one of the most important developments in spinning technique. The machines made convert finished drawing slivers into rovings for the ring frame in one operation.

High Draft Ring Frames.—High drafting systems on ring frames have been standard practice amongst British textile machinery makers for about twenty years.

Roller or apron drafting systems can be supplied to suit a customer's convenience but I need not describe them in detail, since Indian mills have been purchasing both for many years and I think it would be true to say that the wider use of high drafting ring frames in England is a certainty after the war and that financial stringency is the main reason for the present prevalence of low draft machines in Lancashire.

Universality of Ring Spinning in U.S.A.—Whether Lancashire will continue to produce its finest and special quality yarns on mules in preference to ring frames is somewhat doubtful, but I think it may be assumed that for low and medium counts the ring frame will rapidly displace the mule. It is, at any rate, true to say that the adoption of ring spinning in England has in no way been handicapped by a lack of the best possible type of machines. Roller bearing spindles with tape driving, the latest type of anti-ballooning arrangements, rising and falling lappets, longer lifts, off end-driving machine cut gear wheels and centralized headstock lubrication, will be features of the post-war machines.

Individual Electric Driving.—Overhead shafting, the absence of which was favourably commented upon in the "Platt Report," is certainly still a feature of Lancashire mills, but it must be remembered that the cotton mill industry in Lancashire is located in one of the world's richest coalfields and that this resulted in the highly efficient development of the steam drive. For a long time there was no alternative to this method of driving, but the position to-day is different. Electro-technology can now provide an equally efficient method of driving cotton mill machinery and Lancashire, in common with America and other countries, can appreciate the advantages which individual electric drive gives. Here again the adoption of a particular type of drive is largely a matter of rupees, annas and pies.

Large Packages.—Machinery manufacturers in England can and do make provision for the production of large packages at every machine in a cotton spinning plant.

Referring to an article published in the *Journal* of the Textile Institute in January, 1943, I found that British machinists are fully cognizant of the economies in costs and increase in efficiency which larger packages provide and the factors which have militated against their very general adoption in English mills in the past, and it is stated in that article—" 12" diameter cans are now adopted to a great extent at carding engines, combers and draw frames. Ring diameters, lifts and spindle speeds have increased and modern mills would have the following:—

Counts.			*Ring dia.* Ins.	*Lift.* Ins.	*Speed.*	*Depending on*
Up to 10s	..	..	2½	9	6,000—6,500	Turns per inch
10s—16s	..	..	2¼	9 or 8	7,000—7,500	
16s—24s	..	..	2	8	8,000—9,000	
24s—32s	..	..	1¾	8 or 7	9,000—9,500	Circumstances.
32s—60s	..	..	1⅝	7 or 6	Up to 10,500	
60s—100s	..	..	1½	6 or 5	10,500—8,000	

Weaving and Preparatory Machinery

Barber Colman Spoolers.—These very excellent machines are dependent for their satisfactory use on the availability of large package ring bobbins of the " roving build " type. Unless, therefore, a mill intended to equip its ring spinning department with warp frames which build roving type bobbins, the adoption of Barber Colman Spoolers would seem to be impracticable.

Abbot Winder.—The amount of labour employed on this machine also largely depends on the size of the ring warp package supplied to it. It is an excellent machine and is being manufactured in England by Thos. Holt Limited, Rochdale, under licence.

High Speed Warping.—No comments appear necessary. The English equivalent of the American machine is already in use and popular in a number of Indian mills.

Drawing in and Knotting Machines.—Machines similar to those in use in America would probably be an expensive luxury in England unless and until very much greater standardization is achieved in the weaving section of the industry.

Slasher Control.—The Hibbert Patent Air Sizing and Drying Machine, made in England, definitely gives slasher control and higher production and is comparable with machines made in the United States.

Automatic Looms.—Northrop automatic looms, similar to those in use in the U.S.A., have been made in England for at least forty years by the British Northrop Loom Company.

I have not attempted to deal with every mechanical device and " novelty " mentioned in the Report because space does not permit it, but it would certainly be true to say that Britain can and does supply, when considered advisable, machinery capable of producing the larger " packages " mentioned so frequently in the Report.

What I wish to stress is that it is essential to distinguish between the statement in the Report that American mills as they exist to-day are " *mechanically* " more efficient than Lancashire mills and the unwarranted assumption that American textile machinery is superior to that which can be bought from Britain but which, for financial and other equally pertinent reasons, could not and has not been installed in Lancashire mills generally during the last ten or fifteen years.

Conclusions and Short-term Recommendations of the Report

The recommendations and conclusions set out in the Report are not reproduced in full in this article since they have appeared in a previous issue of the *Indian Textile Journal* and, in my view, it would be advisable to study them in their full context and with the comments the members of the Mission have considered it desirable to make upon them,

but the following observations seem pertinent. The Report indicates—(1) American mills employ very much less labour than Lancashire mills to achieve a specified output. The difference appears to be greatest in weaving preparation departments, next greatest in weaving and least in spinning. Standardization and bulk production has greatly assisted in bringing about this result and this has been facilitated by the integration of spinning, weaving and finishing in the same concerns. The concentration of distribution of finished products in the hands of a few large firms has also been advantageous.

A fillip must also have been given to standardization and the use of high speed and automatic machinery by multiple-shift working, scientific management and the very high remuneration which has to be paid to skilled operatives in America. These factors have tended to make it more economical to mechanize as much as possible in order to give the greatest possible output per worker per hour.

(2) For a given count of yarn it is usual to use cotton superior to those used in Lancashire for the same equivalent count. Twist factors used in spinning are also higher than in Lancashire in order to achieve optimum strength yarns. While these higher twist factors would almost invariably have the effect of reducing machine output per hour in the spinning department, it does not reduce output per worker, since fewer breakages occur and workers can and do tend more spindles than in Lancashire or India. In processes subsequent to spinning and particularly in weaving, the higher twist factor used in American yarns has an entirely beneficial effect on output in the strictly quantitative sense.

(3) Work loads are allocated in a scientific manner, e.g., the spindles given to a worker are largely dictated by the breakages he is called on to repair in a given period. This seems to indicate that the Bedaux and similar systems of Time and Motion Study have been and are being applied with good results.

(4) Larger packages are being used at almost all spinning and cardroom machines than is usual in England. It is of course obvious that within limits larger packages are a potent factor in reducing the frequency of handling and that they reduce the labour required per unit of production, but it should be noted that they are facilitated by bulk and standardized production and that there are limiting factors to their use, e.g., floor space requirements per machine, higher machine costs and possibly lower running speeds.

(5) Ring spinning and high drafting are the almost invariable rules in American mills.

(6) Spinning frames in the U.S.A. are usually interchangeable. This is possible as the direction of twist in warp and weft yarns used in America is the same. It is a practice the advantage of which seems open to question.

(7) High speed spooling at controlled tension has largely superseded other systems of winding. The use of Barber Colman Spoolers, Abbot Winders and similar machines is facilitated with standardized bulk production, which is a feature of American mills.

(8) High speed warping is general in American mills.

(9) Automatic looms of the Draper and Crompton and Knowles type have practically replaced Lancashire type looms.

(10) American mills usually spin, weave and finish in the same plant. This arrangement has facilitated standardization and the use of high speed winding and warping, automatic looms and shift-working. The British system of horizontal organization and the wide range of products spun and woven in individual concerns has limited the development of standardization and the use of automatic machinery.

(11) A particular feature of American practice is the use of large warpers and weavers beams and control devices in slasher sizing.

(12) The scope for introducing new practices in the utilization of labour in American mills has been greater than in England owing to the absence of long-standing practices and conventions and the acceptance by labour of scientific methods in matters of assignment of duties. This point has been dealt with earlier but it is perhaps necessary to stress that in India as in England rapid and peaceful progress in rationalization, using the term in its widest sense, will only be achieved by a reorientation of labour and labour leaders'

attitude to scientifically based innovations in the matter of work allocation.

The Mission found no evidence of operatives being overworked in American mills although the numbers of spindles or machines supervised by an operative were almost invariably greater than in Lancashire and, of course, much greater than in India.

(13) The system of work allocation and the greater use of complicated modern machines and automatic looms has resulted in the use of a greater proportion of supervisory and ancillary workers than in England.

(14) Lighting arrangements and machinery spacing appear to be superior to what is usual in England in existing concerns. Fluorescent lighting is usual and modern buildings have permitted very ample spacing between machines which facilitate the use of runways and reduce the physical effort and amount of labour necessary for moving material from one process to another.

(15) Individual driving and driving from underground shafting are noticeable features in American mills.

Short-term Recommendations

What the Mission term their short-term recommendations follow naturally from their observations. They may be summarized as under—

(1) The greater use of high drafting in card and spinning rooms.

(2) The use of larger cans in card-rooms.

(3) Closer internal working arrangements between spinners and manufacturers.

(4) The use of slasher control systems.

(5) The greater use of automatic draw and knitting machines.

(6) Increases, where practicable, in the number of looms per weaver by the greater use of larger yarn packages, warp stop motions, etc.

(7) Greater use of "ancillary" labour in weaving sheds.

(8) More adequate loom spacing.

(9) Improvements in lighting and the greater use of runways for the internal conveyance of material.

The other short-term recommendations made are not of very great importance, but I was somewhat surprised to find no short-term recommendations concerning the introduction of high speed winding and warping.

Long-term Recommendations

The nature of the long-term recommendations comes rather as an anticlimax to the Report itself but they do serve to show what a small section of the problems before Lancashire was comprehensively covered by the Mission's activities and that the achievement by Lancashire of American p.m.h. figures, even if it is possible or economically advisable either wholly or in part, is going to be a strenuous and perhaps lengthy process and one which will involve the closest possible co-operation between all sections of the trade, between employers' and workers' organizations and will require effective assistance from Government.

(1) A change in the system of distribution which would permit closer co-operation with producers and, as far as practicable, bulk production conditions.

(2) "Modernization" of the Lancashire industry on the basis of securing the highest possible production per man-hour.

(3) Preliminary investigations should be made—

- (*a*) to ascertain by means of a comprehensive survey the suitability of existing plant for modernization;
- (*b*) to determine what measure of improvement is possible in existing equipment;
- (*c*) to ascertain as a result of investigations (*a*) and (*b*) the industry's requirements of new equipment;
- (*d*) to ascertain the extent to which mechanical transporter systems can be used in mills;
- (*e*) to determine the most suitable planning of machinery with particular reference to machine and labour efficiency and such matters as spacing and driving.

The Mission also recommended that new methods of mill staffing should be tried out and that their effects on machine and operations efficiency should be measured and simple wage rating methods should be formulated.

(4) To accomplish the work involved, it was recommended that a small number of selected mills should be made available for the investigations and that a panel of

(*Continued on page* 229)

Platt Report and Indian Cotton Mills
Its Significance to the Industry

The publication of the Platt Report on the relative production per man-hour in England and America has created a great stir in Indian textile technical circles as it did in England. The Textile Association (India), therefore, convened, under the presidentship of Mr. Nandulal Mehta, B.A , LL.B., a couple of meetings at which Mr. B. B. Joshi, L.T.M. (Hons.), Additional Controller, Raw Materials and Stores, Cotton Textiles, Government of India, Bombay, spoke on the progress of spinning, preparatory, weaving and labour management in the U.K. and U.S.A. as revealed by the Platt Delegation. Mr. Joshi stresses the educative value of the Platt Report and brings out clearly the various considerations which militate against the wholesale adoption of American methods and machinery in India. The importance, therefore, of working existing machinery to optimum capacity in order to maintain production at the optimum level cannot be exaggerated. In this view the tips given by Mr. Joshi to Indian millowners and their technical staff about improvements that are immediately practicable and about the placement of orders for new machinery and parts will be widely appreciated. Mr. Joshi also suggests two sub-committees to be appointed by the Textile Association, one to study the conditions of cotton mills which would supply detailed information to the questionnaire to be issued by the sub-committee aud the other to suggest what labour adjustments should be made in order to increase labour productivity.

IN the course of his lecture Mr. Joshi expressed the hope that the technical information contained in the report regarding the working and organization of American mills would be very useful to the Indian technicians. A peculiar feature of the American industry was that the whole structure of American cloth production was based on specialization of various processes for treating cotton right from blow-room to the spinning point and treating yarn right from winding to weaving for the production cf cloth. Complete standardization in sales in order to meet the manufacturing requirements was another factor which has brought about the success of the American mills in increasing the productive capacity of the operative to the maximum.

The reorganization of the American industry during 1900-37 was effected with the one object of making the automatic loom a success. In order that the automatic loom should produce the maximum cloth and that the maximum number of looms should be attended by an operative, cotton mills in America destroyed the old plant, carrying out the necessary changes in spinning as well as in winding and sizing.

Specialization, standardization and automatic looms do not exist in India and there is no hope of early introduction of these methods in the Indian cotton mills; so we have to see what can be done to increase the yarn and cloth production with what we have to-day.

Indian Mill Staff Can Hold Its Own

Mr. Joshi further pointed out that the technical staff employed in Indian cotton mills is quite capable of giving the same results as in America provided they had the facilities, plant and equipment as in U.S.A. mills. The same applied to the operative. Mr. Joshi was sure that the skill and patience exhibited by the technical staff and the textile operative is perhaps in no way inferior to that of the American technical staff and the operative. The cotton industry in India is adaptable to any sort of change which has to be put into effective operation by the staff and the operative whereas in American mills this state of affairs does not exist. Whenever changes in counts of yarn on the same machinery right from 6s to 80s and short lengths in weaving have to be effected it demands greater skill and attention on the part of the technical staff and the operative who have to carry out the job with economy and efficiency and less wastage.

Features of America's Spinning Plant

Mr. Joshi commented on the most important features of the U.S.A. spinning plant, such as the use of blending hoppers in the opening room, single process opening, use of twin combers and of lap winders, use of high-drafting systems at the speed frames, and complete elimination of bobbin creels from the card room in some cases, use of high drafts in ring spinning, and overhead travelling cleaners. Mr. Joshi explained in detail the differences that existed in U.S.A. and U.K. between the mixing system, the opening treatment, moisture control, carding, combing, drawing, speed-frames, ring-spinning, varying sizes of packages twist in yarn, the relationship existing between coun tand staple, yarn breakages, cleaning arrangements employed in spinning mills and type of spindles used between the American and U.K. mills.

Most of the working conditions existing in the above departments were more or less known to the technical staff in India and there seemed nothing new, but he considered that it has its educative value and technical men in the textile trade should not forget that any piece of technical knowledge obtained by a study of this report would certainly assist in improving the standard of work which they are carrying on in India to-day.

Immediate Improvements Suggested

Mr. Joshi emphasized the need for immediate improvements in cotton mills for increasing spinning production and laid stress on changing the existing low-draft ring-frames into high-drafts in spinning and flyer frames where possible, on the introduction of 12″ card cans instead of 9″ ones, on the possibility of increasing the size of packages at every machine. As supplies are to come from the United Kingdom, he pointed out that one has to apply one's mind very carefully before orders are placed, keeping in view the improvements which can be carried out immediately after the materials ordered are obtained from the United Kingdom. The U.K. manufacturers of machinery, perhaps, may not be able to supply the full needs of India during some years to come and, therefore, one has to think of conversion materials as the immediate need to increase production. Any haphazard orders placed for a machine or two would not produce beneficial results.

Shortage of Skilled Labour

Mr. Joshi was of opinion that there was no shortage of man-power in India as it existed in U.K., but he felt that there was shortage of trained and skilled labour. He was of opinion that this difficulty could be overcome by spread of general and textile education on a wider scale and necessary means may be forthcoming for this purpose from the funds which would be accumulated with the Government of India on account of the Cotton Textile Fund Ordinance of 1944 under which a 3 per cent. export duty has been levied on cloth.

India's Bottleneck

It was pointed out that Britain's bottleneck is labour and India's bottleneck is the required plant and equipment and certain conversion materials for increasing production, U.K. being the only supplier. The textile engineering works in the U.K. would be busy with re-equipping cotton mills in U.K. according to the suggestions and recommendations made by the United Kingdom Mission which Mr. Joshi was sure would be adopted by the U.K. Ministry of Production. Thus India's need for plant and equipment may be treated as secondary. Therefore technical men employed in cotton mills should be very careful in advising millowners as to what should be exactly ordered keeping in view that India needs more yarn to-day. Mr. Joshi rightly pointed out that it was no use building castles in the air and thinking of reorganizing India's industry on the basis of U.S.A. The existing conditions do not provide for such schemes to be put into operation. It is true that there is some scope in future to think on the lines of U.S.A. but it might take a very long time before any scheme could materialize. In the end it was suggested that a committee should be set up by the Textile Association to study the conditions of cotton mills. This Committee should draft a questionnaire which should be circulated to all the mills in India. Perhaps all the mills may not co-operate in submitting the returns but a fair idea could be obtained from the replies received on which the Committee can base their calculations with regard to the need of the spinning industry for India so that increase in production may be brought about in future. Mr. Joshi explained that from what he knew textile machinists in U.K. were competent enough to supply the latest types of textile machinery with the latest improvements and modifications which are second to none even when compared with U.S.A., but the problem was that this supply will not come in the near future. He also pointed out that the cotton industry in India remained in its stagnant condition during the past 40 years on account of depression. It was true that the control of the mill industry is now passing on to the stock exchange financiers and it will be difficult to judge as to what would be the state of affairs of the cotton industry in the near future.

Preparation

The practice of preparing warp in U.S.A. appears to be largely through the use of high speed (Barber-Colman) automatic spooler and high speed warper. The United Kingdom mills are still using the upright spindle winder and beam warper as is the case with Indian mills. The U.K. Textile Mission has thus compared the production per man-hour in warp preparation of the U.S.A. and U.K. mills, keeping in view the wide difference in plant. British p.m.h. over the range of counts taken is less than the American by 79.5 to 85 per cent. in winding and by 78.5 to 88.7 per cent. in warping. British labour requirements range from 4.9 to 6.7 times the American in winding and from 4.7 to 8.9 times the American in beaming.

In weaving, several cloths having similar manufacturing particulars have been compared, keeping in mind that American practice is based on the automatic loom whereas British practice is based on the four-loom system for coarse cloth and six-loom system for medium and fine cloth, with hand drawing and twisting.

On the basis of total output and total labour force British weaving mill production per man-hour is less than American by 57.1 per cent. for coarse yarn cloth, by 66.9 per cent. for medium yarn cloth and 56.3 per cent. for fine yarn cloth. The British labour requirements exceed the American for these three cloth types by 133 per cent., 203 per cent. and 129 per cent. respectively,

Britain employs 86 to 89 per cent. labour on machines, 9 to 12 per cent. ancillary and 2 to 3 per cent. supervisory labour, whereas America employs 43 to 48 per cent. machine labour, 44 to 51 per cent. ancillary and 7 to 11 per cent. supervisory labour.

It is clear, however, that while the cloth production per loom is more or less the same in the U.S.A. and U.K., there is a very big difference in production of cloth per operative on account of a larger number of automatic looms attended by the operative in America. Cloth production per operative on 48 hour-basis for American coarse, medium and fine weaving mills is 1,766 yds., 2,568 yds. and 1,491 yds. whereas this is only 757 yds., 847 yds. and 652 yds., respectively, for similar British cotton mills.

Work-Load Assessments Tests

In American mills regular observations are made to determine the number of loom stoppages per hour. If the stoppages are found to be higher than the basic figure steps are taken to ascertain the cause. Number of looms attended by the weaver depends upon the number of loom-stoppages. By checking loom stoppages regularly loom efficiency and production, defective work and fixing, and work-load assessment are always under observation.

For the successful working of a work-load assessment system a co-operative labour force is essential. Such a labour force exists in American cotton industry and provides unlimited scope for the users of the most modern machines and scientific methods in the industry. The number of looms supervised by a weaver are changed as circumstances require and as scientific investigations prove desirable. For example, a low-reed cloth will permit of more looms per weaver than a high reed cloth, all other things being equal. The fundamental consideration is the amount of work a weaver can perform in a given time. In the case of a weaver this work consists mainly of repairing broken ends and weft and starting looms.

The Automatic Loom

The automatic looms in use are manufactured by Crompton and Knowles and Draper Company, the former being bobbin-changing and the latter shuttle-changing type. Recently many improvements have been made in loom design, such as pressure lubrication and anti-friction bearings. The newly designed looms are running successfully 20 per cent. faster than old models.

American mills use high speed machines in folding departments. Rolls of cloth about 250 yds. long are conveyed to the cloth warehouse where ends are stitched and cloth is then passed through shearing machines having rolling attachments, then to the inspecting machines fitted with fluorescent lighting for recording faults. For a cloth output of approximately 100,000 yds. per 48-hour shift the cloth department would be equipped with 3 shearing machines, one rolling machine, 7 inspection machines, 7 folding machines, 8 grading tables, 4 long grading tables, 1 cloth stamping machine, 2 cloth baling presses and 1 platform scale.

In the opinion of Mr. Joshi there seemed no necessity to comment on the plant, equipment and organization of British cotton mills as these have undergone little change during the past 50 years and the working is more or less on the lines of Indian cotton mills.

Management and Labour in American Mills

The management and labour of American mills is worthy of study and if possible their ideas should be introduced in Indian cotton mills. The handicap of Indian cotton mills from the point of view of improvement is still (i) a fair amount of old staff existing in departments which is not amenable to any change in the century-old methods followed by them and (ii) want of flexibility in adjusting labour to look after more machines when such opportunities arise on account of strong trade unions.

The peculiar features of American mill management are:

(*a*) The American mills employ young technically trained officers between the age of 30 and 40. These young men find their way into such positions by offering their services during college vacations. Mills are generally keen on securing the services of a student during summer months. (*b*) No procedure or practice is regarded as permanent and improvements are always taken in hand. Experiments are frequently made to establish the most economic balance between machine and labour efficiency. (*c*) The importance of research is fully appreciated in American cotton mills.

Labour

Labour employment on machines is based largely on scientific work-load assessment by detailed analysis and measurement of the time spent on the various duties comprising the operative's job, as the assessment is made on the number of producing units which an operative of average skill can supervise without hardship.

The percentage of idle time is regarded as rest time. If the rest-time percentage regarded as necessary is 10 and if a weaver is not in a position to obtain this, then the weaver is considered to be overloaded and the number of looms under his or her charge is reduced until the standard rest time is reached. The value of the rest-time percentage varies with the type of work and may range from 10 to 20 per cent. the higher allowance being made for the heavier jobs, such as ring doffing.

Work-load assessments also form the basis of the wage rates for many of the machine operatives and for a given amount of production by an operative of average ability, a standard wage rate is established. If an operative produces more than an average then a bonus rate is added to the standard.

There is no fixed rate of wages in American industry and individual mills have their own wage rates fixed in agreement with workers' representatives. Of course, there is a fixed minimum hourly rate fixed by legislation.

The peculiar feature of the American mills is the high degree of flexibility in the utilization of labour. No difficulties arise to prevent either employer or employee from trying different methods of staffing or apportioning of machines per operative, which might result in more efficient and economic production. For example, if by increasing the twist factor in spinning from 4.3 to 4.75 the yarn breakages are reduced by, say, 20 per cent., then the work of the operative is correspondingly reduced and she can be given a greater number of spindles to supervise for the same expenditure of effort. It is praiseworthy that an understanding exists between the management and operatives that when major changes take place in machinery and equipment, in methods of work, or in types of yarn or cloth, changes in work-loads and assignments would be necessary.

A mobile labour force is employed by American mills for assisting operatives when machine stoppages such as doffing are involved. This force includes learners under the supervision of an experienced operative or instructor.

Labour specialization or gradation is practised in American mills. It is this practice which accounts for much higher percentage of ancillary labour which is economical on account of very high wage-rates.

For training labour vocational schools are in use where workmen attend after the shift work. At many schools no fees are charged or, when fees are charged, they are paid by the mill. American mills employ more men workers as the larger number of units supervised by machine operatives demands this.

Labour shortage is generally greatest during the third shift. Production in the third shift is also the lowest and probably uneconomic.

The average age of the American operative is considerably lower than that in Britain. This is of great importance so far as automatic weaving is concerned as agility and quickness of movement are considered essential for high efficiency.

Living Conditions

The conditions under which the operatives live in the mill villages or towns are much better than those in Britain. The mills in the Southern States are located in clean and attractive rural surroundings and constitute the only industrial organization in the village providing a livelihood for the greater part of the population and social, educational and other services of the community. Workers' houses generally consist of 3 to 5 rooms; they are often owned and kept in good repairs by the mill. These are lent to operatives at modest rents. Clean mill buildings having small gardens with an attractive country background present a contrast to the cheerless mill chawls in Bombay. The layout of these villages is planned by landscape architects and engineers and includes fine wide pavements, modern street lighting, well designed drainage and sewage systems, schools, churches, and community houses, shops, etc. The American manufacturer appreciates the importance of the operative's contentment and happiness outside the mill. Sir Victor Sassoon remarked, in his presidential address last year at the first All-India Textile Conference, that industries in big cities like Bombay had created slum areas for the workmen where they could not be looked after. He pointed out that in future factories should be planned in villages where workers could live with contentment and happiness.

None of the facilities indicated above for American mills exist in Britain, or, if they are existing, their percentage is very small.

The Platt Mission, in its recommendations to increase labour productivity in the U.K., states that (1) a higher degree of standardization or specialization is needed in Britain; (2) the general standard of technical equipment needs raising; (3) working conditions in British mills need considerable improvement; (4) greater co-operation between spinners and manufacturers of cloth must be established; (5) the managerial staff need more scientific training, and (6) economy must be practised in utilizing labour.

The changes contemplated by the Platt Mission as a result of their short-term recommendations are:—

Introduction of high draft in spinning and card rooms, use of 12″ card cans and big dia. flanges in warping and sizing and adjustment of labour so that more machines may be attended by each operative.

So far as Indian cotton mills are concerned, standardization or specialization within certain limits on a mass scale is possible. Indian cotton mills have manufactured and supplied large quantities of textile material required for Defence services during the war according to the standard specifications of the War Department. Thus there should be no difficulty in adhering to standardized production even for civilian markets once such standards are laid down.

Mr. Joshi at the end stated that other recommendations are worth adopting for general improvement in Indian cotton mills. With regard to labour adjustment some thought on co-operative lines is necessary. If a technical committee of mill managers is constituted to suggest what labour adjustments should be made in order to increase labour productivity of Indian cotton mills and these suggestions are jointly discussed with executives of the labour unions, some beneficial results would be produced, of course with Government backing, which is essential. If a proper line of action is not drawn up it would lead to confusion arising out of strikes, etc., on account of labour organizations misunderstanding the position. As an organization of the technical men in the textile industry, the Textile Association should have its voice heard on the question of labour adjustments, which would result in benefit to the industry. A sub-committee of the Association may, therefore, be constituted to examine this problem.

Platt Report and Lancashire Machinery

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technical experts should be appointed to conduct them, including progressive men from the spinning, weaving and finishing sections of the industry.

It may be presumed that the industry, in co-operation with Government and Labour representatives, will give very close attention to the recommendations made in connection with "Long-term" planning, but it is still far too early to state whether anything revolutionary will be achieved. All that can be said is that Lancashire is fully awake to the need for developing and maintaining a considerable home and export trade in cotton textiles after the war and that one of the prerequisites to success is a large-scale modernization of its mill plants, but it is also realized in many quarters that the highest possible output per man-hour does not necessarily mean lowest possible production costs and that a wholesale and slavish imitation of American practice would by no means guarantee an adequate and continuous market overseas.

ALL-INDIA TEXTILE CONFERENCE
SECOND SESSION 1945
Organised by THE TEXTILE ASSOCIATION (India), Bombay
27th and 28th FEBRUARY and 1st MARCH 1945
at the V. J. T. Institute Grounds, Matunga, BOMBAY

All-India Organization For Cotton Mills?

Another View of Rationalization

(*Specially Contributed*)

RATIONALIZATION has been much talked of since the movement began in 1921, when post-war boom was followed by a severe depression. Very many definitions have been given of the word "rationalization" by different authorities, the aim of all being to benefit the producers, labourers and consumers alike. In short, it consists in replacing traditional, antiquated and unsystematic methods of production and distribution by scientific and reasoned ones. It takes account of all factors affecting production, wages, efficiency, distribution and stabilization—a very wide term indeed. It is not merely financial reorganization, installation of up-to-date machinery resulting in displacement of workers, institution of scientific management or a combination of all producing units to eliminate competition, secure large-scale economies or increase production at lower cost. Such a change is *pseudo-rationalization* and not genuine rationalization. Much of the prejudice and opposition is due to the piecemeal and unscientific application of rationalization. Rationalization is meaningless if, with the introduction of up-to-date machinery, means are not devised by a process of reasoning and research to absorb the increased output and the released labour force.

Rationalization has a narrow as well as a wide meaning; in its narrow sense it can refer to one industry and in its wide meaning "to collective activities of the large economic and social groups." The latter is a problem of planning. In this brief article rationalization has been used in its narrow sense and as applicable to the biggest industry of India—the cotton textile industry.

The cotton textile industry occupies the most important status in Indian economy. There are at present about 400 mills with over 1,00,30,000 spindles, 2,00,000 looms consuming 48,00,000 bales of cotton, giving employment to more than 5,00,000 workers. In 1941-42 Indian mills produced 4,494 million yards of cloth and during the period 1st September 1939 to 30th November 1942—India exported 1,925,429,046 yards of cloth including 34,176,553 yards to the United Kingdom and 3,379,926 yards to the U.S.A. The problem before us is to maintain our industry in this flourishing state even after the war, and for this rationalization is necessary.

All-India Organization an Idealized Solution

Suggestions have, however, been made about the flotation of an "all-India Organization capable of enforcing its decisions." It is considered "*perfectly possible*" to float a joint stock company like the Associated Cement Companies Ltd., to manage all the Indian cotton mills, the new company to take over the assets and liabilities of all the existing concerns paying for stocks in cash and block capital in ordinary shares. If the industrialists do not voluntarily float such a concern the Government of India should take the initiative by passing an Act "authorizing the compulsory acquisition" of all mills. Let such a company be floated first and the "real technical difficulties about the valuation of assets and about the relative efficiency of different producing units among others will arise after the company has been floated. But it is possible to solve such difficulties with the help of *known methods.*" It is certainly easy to idealize solutions than to suggest really practicable measures. Associated Cement Companies is no instance on the point. The constituent companies of the A.C.C. do not probably exceed ten. It was floated when protection had been denied to the cement industry and it was doomed if the competing units did not combine. The number of cotton mills in India is about 400 and it is less than reasonable to expect that these 400 mills can combine under one organization, merging their separate entities. Even the Sugar Syndicate could not attract the membership of all the sugar mills, in spite of the crises of 1936-37, when first class sugar crystals were selling at Rs. 6-1-6 per md. in the Cawnpore market. Luckily for the Syndicate the popular Governments in the U.P. and Bihar passed the Sugar Control Act in 1938 and made it compulsory for every mill in the U.P. and Bihar to become a member of the Syndicate. In 1940, the members fell out and the Government withdrew its recognition. But in the interests of the industry it was restored after some time with the Sugar Control Board at the helm. Since then, the Sugar Syndicate has been almost a defunct body, the real power being vested in the Sugar Control Board and since 1942 in the Sugar Controller.

During the depression (in 1930) when the cotton industry was severely hit by foreign competition and other handicaps, a scheme to amalgamate 34 cotton mills in Bombay was launched by Sir Ness Wadia. It had been recommended by the 1927 Tariff Board and had the support and approval of the Governor of Bombay. Yet the scheme utterly failed owing to "technical and other difficulties." The valuation of assets and liabilities is a difficult job and there are no "*known methods*" which can be applied, e.g., there are two mills, one having a capital of Rs. 10 lakhs and the other, Rs. 20 lakhs. The former is giving a yield of 10 per cent. and the latter, say, that of 5 per cent. The former will claim capitalization of its profits and the latter will put its case as one where optimum production had not yet been reached and its return in future should be much more. This is a simple case; greater difficulties will arise where there are funded debts, mortgage liabilities, inadequate assets, etc. There is a great danger of the new concern being overcapitalized. The block capital invested in the cotton industry at present is more than Rs. 100 crores. What should be the probable amount of the capital of the new concern, which should purchase all the existing ones and pay for their assets and goodwill? How powerful should such a company be? This will be a great monopolistic organization and will be in a position to completely regulate supplies and charge any prices. Either the whole thing must be socialized or else if such a trust is left free, the consumer shall be at its mercy and will be in danger of exploitation.

Putting the Cart before the Horse

The proposal of floating the corporation before arriving at an agreement amongst the member-mills is like putting the cart before the horse. Without proper appraisal of the constituent companies, it is not possible to determine the amount and form of capital (owned and borrowed) that will be needed by the corporation. Therefore, the corporation should follow and not precede the agreement amongst the member companies. The fact that the conditions of production "differ radically from place to place makes it extremely difficult to arrive at agreed decisions" and to bring about one organization which would command the resources of all the mills in spite of the differences in their costs.

As regards Government control during the war and Government initiative in floating such a concern, it is a hard fact that Government control can be effective and successful only with the co-operation of the industrialists. The present control is justified by abnormal times and the industrialists know that it is not for the outright purchase where they will lose their identity. It is for a short duration. The millowners are under a subjective situation. It is now possible for them to obtain transport facilities, adequate and timely supplies of chemicals, coal, mill stores, raw materials, etc. The cost of production is fixed and adequate profits in addition to depreciation and replacements have been guaranteed. The Government, too, is in a position to provide all these facilities in these times when there is no foreign competition and uncertainty. In a post-war depression, the Government can neither be expected to shoulder this responsibility nor does it possess the requisite qualifications unless the system of Government itself is thoroughly changed. Moreover, the mills would not like to submit to Government control when they can get supplies of their requirements in competitive markets. Apart from it, in a world where the forces of the State are being prepared to fight trusts, cartels and other forms of combination which have thoroughly abused their monopolistic positions and privileges, as is clear from the anti-trust Laws of U.S.A. and the recent efforts of the London *Economist* to mould British opinion on the same pattern, the State in India would be putting the clock back if it tried to set up such trusts and thus sow the seeds of Fascism.

As regards organizing ability and managerial skill it is rather difficult to agree with the observations made in the article published in the July issue of the *Journal.* The factor we are most lacking in for the rapid industrialization of the country is organizing capacity and managerial skill. There is dearth of industrial leadership in the country at present. Even in highly experienced and seasoned industrial countries, the dearth of organizing ability has been the limiting factor in the expansion of industrial units. Apart from it, even if it could be accomplished, it will place hurdles in the way of the training of new industrial leaders and organizers which would be unfortunate for a country in our position.

In brief, the suggestion is unworkable and a retrograde one. Already we observe that Indian capitalism is shaping itself on the lines of British and American industrial organization. Big business houses like Birlas, Dalmias, Goenkas, etc., are creating combinations of a different character. Every one wants to have manufacturing concerns, insurance companies, banks, newspapers and trading companies to manage. What is needed is a proper regulation of these units in the interests of society as a whole; otherwise the problem will become too big to control after a while. We admit that for export purposes a centralized selling agency may be established that should study the tastes of foreign consumers, appoint agents, study markets and pass on the necessary information to the mills interested in the export business; but to propose a venture managing 400 mills with one and a quarter crores of spindles and two million looms is beyond our imagination.

Holidays with Pay in New Zealand *

UNDER the Annual Holidays Act, 1944, a system of annual holidays with pay for all workers became operative in New Zealand on 1st August. The Act provides that every worker, at the end of each year of employment with any employer, is to become entitled to a holiday of two weeks on ordinary pay. The holiday is to be allowed within six months after the worker has become entitled to it ; but, if the employer and worker so agree, it may be taken in two periods of one week each, and the whole or part of the holiday may be allowed in advance, before the worker has become entitled to it. Persons whose employment terminates before they have been allowed the holiday to which they are entitled are to receive the pay due for the holiday.

In cases in which employment is terminated after less than one year's service or less than one year after the last annual paid holiday in the same employment, the employer is required to pay the worker, in addition to all other sums due, an amount equal to one-twenty-fifth of his ordinary pay for the period of employment. When a period of employment is less than three months, the payment is made in stamps equivalent in value to one twenty-fifth of the ordinary pay due for the period of employment, or, where this period is less than three weeks, to one twenty-fifth of the ordinary pay due for the time actually worked during the period. These stamps are to be affixed by the employer to a special " workers' holiday card," and cannot be cashed until after the expiration of a year from the earliest period of employment in respect of which uncancelled stamps are affixed to the card.

The Act is not to prevent the operation of any more favourable holiday arrangements to which a worker may be entitled under any other Act or under any award, agreement or contract of service.

Employers are required to keep a record, to be called the " holiday-book," showing, in the case of each employed person, the name, dates of beginning and of terminating service, dates of holidays allowed, amount of holiday pay and other relevant particulars. The " holiday-book " is to be open to inspection by Inspectors of Factories. Infractions of the Act are punishable by fine, and, in cases of default, Inspectors of Factories may institute civil proceedings on behalf of any worker for the recovery of moneys due.

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*From the *Ministry of Labour Gazette*, London, July 1944.

Lubrication-Oil Stains in Textile Goods

By Dr. G. ULLMANN, *Manchester*

(*Specially Contributed*)

THE question of lubrication-oil stains has occupied the textile industry continually for many years without having been fully answered. The problem must be considered from two points of view : on the one hand, with a view to the utmost prevention of the formation of lubrication-oil stains, and on the other hand, with a view to the easy and sure removability of those formed during processings.

Severest control and order, also mechanical equipment of suitable kinds, will assist in the prevention of lubrication-oil stains. This applies to all kinds of machines used in spinning, weaving, etc., and it is no less important in the finishing plants, where goods during manufacture and subsequent processes must be protected against such stains.

A most important matter is the arrangement of the bearings. They must not be directly above the machines, so that in this way splashes may not fall easily on to the goods. Drip-pans will avoid trouble, and they must be carefully emptied and cleaned at suitable intervals.

This, of course, is a matter to be worked out separately for each individual plant, in spinning mills as well as weaving mills, etc. In an interesting article on page 100 of the November 1937 issue of the American journal *Cotton*, under the title "Oil-stains on Yarns are Unnecessary," the parts of spinning machines where trouble mostly appears are discussed in detail. In weaving, above all, it is necessary to keep clean all parts which are permanently oiled, and are situated near the goods.

In the December 1937, issue 12 of the *Monatsschrift fuer Textil-Industrle*, Leipzig, there are, on page 309, many detailed references in reply to a question dealing with the prevention of lubrication-oil stains, for which reason this publication is especially mentioned.

The keeping clean of all parts of the Jacquard looms also needs special attention, in order to prevent dirt therefrom getting on to the much more expensive fabrics, because they are woven in so firmly that the removal of the stains becomes more difficult than ever.

Thus, a great deal can be done to prevent lubrication-oil stains, and preventive measures are certainly the best and cheapest way. One can, almost at the first inspection of a factory, judge the manner of a plant's management by the number of piecegoods cleaners employed there relative to the number of looms. It is not always known to the manager how much time the worker occupied in this department spends on the removing of grease spots and how much time he spends on the other work he has to do, such as nopping, cutting off the ends of the threads, marking for the eventual repairing of defects of all kinds, etc. The result is often surprising if, for trial, first on several pieces, only the lubricating-oil spots are treated and then, in a second operation, all other cleaning work is done showing the relative times taken. If one also takes into consideration the cost of chemicals for cleaning and the eventual decrease of value of the cloth, which often cannot be entirely avoided even with the utmost care, as in most cases the stains cannot be removed to a point of invisibility, the calculative importance of increased precautionary measures must begin to be appreciated.

But the discussion of these mechanical and control measures are not the chief purpose of this paper. It deals chiefly with the advisable composition of lubricating oils and with the methods of cleaning stains therefrom.

The composition of the oil and its correct selection influence essentially the formation of oil stains, because, if the oil-film adheres sufficiently closely to the bearings, there is less risk of the oil of the bearings being spattered on to the goods. If the temperature of the work-rooms, which often changes, is also taken into consideration, the selection of the most suitable type is not too difficult. Extensive study has been made to blend a type of oil which can be more easily removed during finishing operations. Of course, the lubricating effect must not be influenced by blending the oils with such components which assist in the removal of oil spots.

One of the oldest methods of preparing such types of oils is mixing them with easily saponifiable vegetable oils, especially rape oil, which is transformed into ordinary soap during cleaning by treatment with weak alkalis, such as carbonate of sodium, etc., and thereby emulsifies the mineral oil spots and removes them from the fibre.

It has been found that in order to obtain a really satisfactory result, the rape oil quantities must be increased to 75 per cent. of the oil, so that the final product contains only 25 per cent. of mineral oil. The minimum mentioned in the publications of the *Bulletin de la Societe Industrielle de Mulhouse*, discussing these matters, is a mixture containing 40 per cent. mineral oil with 60 per cent. rape oil.

Furthermore, attempts have been made to add to the oil, instead of rape oil, organic substances, mostly salts of organic sulphonic acids, naphthenic acids, etc., and considerable progress in this direction has been achieved by adding to the lubricating oil 15 per cent.—20 per cent. of such substances so that the mineral oil quantity, which is the only component of importance for lubrication, is much higher. Nevertheless, such blendings generally have not proved as completely satisfactory.

Of essential importance for the removability of the oil stains is the composition of the lubricating oil itself. Lubricating oils are invariably mixtures of various hydrocarbons and other ingredients, the exact composition depending on the crude oil from which the oil has been prepared. They vary, for instance, in their content of extremely obnoxious asphalt-like impurities, paraffin waxes and so on, though it is possible, to some extent, to remove these compounds from the oils.

Particularly inconvenient are the paraffins, where one must distinguish the so-called hard paraffins which have a higher melting point, from the soft paraffins which melt at a lower temperature. The former make the removal of the oil stains very difficult.

The yellowish-brown colour of the oil stains is no indication as to their removability, for in spite of the paraffins being uncoloured, their removal from the fibre is generally much more difficult than that of the real mineral oil stains. The same applies to heavy vaseline oils.

Here must be considered whether the real necessity is entirely to remove an oil spot from the fibre, or only to make it invisible. The former is inevitable in all those cases in which goods soiled with oil stains are subsequently subjected to a finishing process, such as bleaching, dyeing, printing, etc., because even if the colour of the spot disappears, the stain is not likely to be entirely removed, and in the finishing of such material there appears the known irregular effect, which depreciates it.

But in the case of goods which are not eventually bleached, dyed or printed, e.g., fancy woven goods, where only the visibility of the stains must be got rid of, it is sufficient if only their colour is removed, even if certain residues remain on the fibre. In such cases the so-called "white oils" are useful. These, which are considerably dearer, are light-yellowish to almost white, as, e.g., the oils normally used for sewing machines. Such light or white oils are mostly produced by bleaching the mineral oils with concentrated sulphuric acid.

Trials were made treating oils by similar processes to those used, for instance, in heavy bleaching them, etc. The results were not without a favourable effect, but were not as yet entirely successful. Nevertheless, these are experiments which should be continued.

But a considerable improvement of the oils can be obtained before using for lubricating by filtering them thoroughly through sand, coal, wood-wool, cotton and especially clays, either in the user's plant or in the refineries. Certain oil suppliers themselves recommend this working method, but in general the textile mills do not take this action. The effect is a good one and every plant is well advised to try out the possibilities.

Returning to the question of paraffins: it is the task of the refineries to remove them, especially the hard paraffins, from the oils. This is mostly effected by diluting with some low boiling solvents and cooling the oils down to a very low temperature at which the paraffins are solidified, thus "freezing them out" and they are then removed from the oils by filtration. In this respect, the origin of the oils is also very important, as certain oils, for instance Russian, are relatively poor in paraffin, and therefore more suitable for textile uses.

Hitherto, the composition of the oils and its influence on removability have been discussed. But this is not the only factor which influences the removability of the oil stains, as the stains also contain impurities, which do not come from the oil, but from the processings, for instance, from the bearings, from dust, and sometimes very disagreeable impurities from graphite and lastly also from metal fragments which have been rubbed off, such as iron, copper, etc., which are very troublesome in bleaching and dyeing because of their catalytic effects. But there are improvements in progress in this respect, by manufacturing the bearing, and perhaps also the shaft material, from new artificial material which is not metallic, or by protecting these parts with such material. Also the use of new types of stoneware for bearings is being studied, for instance, types of alloys of stoneware and silica, which are remarkably good conductors of heat.

A necessity, sometimes not sufficiently recognized, is that the oil has to be taken often out of the bearings, filtered and then returned, after the bearings have been carefully cleaned. Also "pure oils" make spots while "ageing" on the tissues. There takes place on the goods an oxidation or resinification process, which also causes a darkening of the oil stains, and in this way renders their removal more difficult, especially as in storing they infiltrate more deeply into the fibre.

Singeing, to which nearly all textile goods are subjected before finishing, and steaming, often employed with woollen and rayon goods, cause an unfavourable alteration or enlargement by a deeper infiltration of the stains into the goods, all of which makes the removal more difficult.

For this reason, it is impossible when testing varieties of oil or mixtures, on fresh stains, to foretell how easily they will wash out. Such fresh stains are nearly always comparatively easy to remove. Therefore these tests must also be carried out after a longer storage of the stained goods at a somewhat higher temperature, or after singeing, steaming, etc. Further, it would be good to mix a little of the dirty residue, separated during the filtering of used oil taken from the bearings, with the oil which has to be tested.

The artificial fibres more easily become stained because of their high absorbency, and the stains more quickly penetrate to the interior of the thread. In addition, the removal of the stains from such fabrics has to be effected with much more care than from fabrics of natural fibres, because they must not be rubbed. Then again, compared with naturals, the artificial fibres are much more sensitive to many of the chemicals used for spot cleaning, so that many of the solvents used for natural fibre materials have to be avoided.

In removing the stains, one must distinguish between two cases, viz., the first, in which with fancy woven or ready finished goods a wet treatment cannot be taken into consideration, so that only a local cleaning can be undertaken, and the second case in which the goods are subsequently subjected to a wet treatment. The latter is the case, for instance, with bleaching, dyeing and printing.

Sometimes with delicate goods coming from the machines, the two methods are combined; that is to say, the woven or knitted goods are at first treated with a local cleaning process, before being processed by the wet treatment. A wet treatment before singeing would theoretically be quite favourable, but this is mostly economically impossible.

For the removal of oil stains locally there have been in use for some years many solvents for fat and oils of all kinds, the enumeration of which can be omitted here. But the really good solvents are not at all cheap, and the treatment itself is not always very simple.

Great care must be taken that an enlargement of the oil stains through local treatment, the so-called formation of "halo," is avoided. This necessitates the avoidance as far as possible of a rubbing of the oil stains and their removal, to a great extent, only by dabbing them on a suitable support till the eventual residual solvent is entirely removed by washing with soap, sulfonated oils, alkalis, *solvents for fat, etc., in various combinations.*

A process regarded as very good for avoiding " halos " is the preparation of a paste of a solvent, etc., with suitable substances, such as magnesia usta, powdered gypsum, etc. The paste is applied to the stain, and not rubbed, but pressed on it. It absorbs the oil and, after drying, the powder is brushed away.

This working method is based on the idea, which is absolutely right, of removing first of all the oil on the goods and the accompanying impurities. It is then easier to get rid of the dirt on the goods by a subsequent local wash, as described above.

It was successfully proposed by the author that the paste be made with other substances instead of magnesia, substances, which owing to their morphological formation, have a greater absorbing capacity, that is to say, which soak up by capillarity the solvent and the extracted oil contained therein, as such substances, especially tannins, proved very good, preferably the so-called bleached, almost light yellow kind, and further, since even bleached tannin has a certain colour, powdered sugar.

A prominent specialist continued these studies, and the best results were obtained from a paste made of a solvent mixed with a highly active finest dispersed clay, for instance, with a French material known under the trade-name of " Sisol " but other similar suitable products are also available.

The importance of the whole problem is clearly to be seen from the fact that the " American Society of Textile Chemists and Colorists " has studied it together with the " National Union of the American Finishers of Textile Stuff," and in February 1937 there was established a committee which published a report about the usefulness of various cleaning materials.

A detailed report about this was published in the journal, *The Dyer and Textile Printer*, in the issue of April 9th 1937, page 399. Some general properties (specifications) were quoted for the fat solvents which can be applied without trouble to goods which are subsequently to be bleached, and prescriptions for their employment have been published too.

These agents must not contain any free *alkalis other than ammonia*. They are to *be applied to the stains with a sponge only, without any rubbing. The stains will then be removed entirely by the regular* bleaching operation. If oxalic acid is also used, as is often necessary to remove iron spots, the fabrics must be thoroughly washed afterwards. There must be more caution with the use of fat solvents on artificial silk, when the composition is not known, and it must be pointed out that acetate silk is especially sensitive to some products, for instance, acetone and free alkali.

There is published in the report a list of solvents for fat which can be used without trouble in connection with the bleaching of fabrics from cotton and man-made fibres. Amongst them are oleic acid, Turkey Red oil, soap from olive oil, castor oil, tallow and rosin oil, and, for removing rust, i.e., iron, fluorides and oxalic acid, which must immediately be carefully washed out. Further recommended as effective solvents of fat are tetraline, hexaline, chloroform, carbon tetrachloride, naphtha, all these separately, or in mixture with soap or sulfonated oils or similar products.

A recipe for a suitable stain-washing agent is quoted here :—

White castor oil soap ..	10½ kilos
Chloroform	½ kilo
Ammonia of 26° Bé ..	3 kilos

However, although the use of chloroform, which is a solvent for fat, is in fact very successful, it is not very much favoured because of its narcotic effect.

One must be warned in the treatment of artificial fibres or goods containing artificial fibres against amyl acetate, unsaponificable oils or waxes, emulsions of linseed oil, or other not easily saponificable oils, or mixtures containing such products. No other acids or alkalis were recommended but oxalic acid and ammonia. A recommendation coming from such a prominent body merits full consideration.

Of course, the list of suitable solvents for fat is not complete as appertaining to it are also methylhexaline, benzine, ether, trichlor-ethylene and other volatile substances, for instance, also certain special products like Emulphores, Lissapol, Silvatol (Graphite stains !), Laventines, Tetrapol, Perpentol, etc., are admissible. However, they are not always acceptable in respect of costs. There are also many different kinds of sulfonated fatty alcohols which have very good properties.

The second above-mentioned method of removing oil stains consists of a complete wet treatment of the goods, as is always the case with bleaching, etc., and the pre-cleaning of fabrics by washing, soaping, etc.

As additions to bucking liquors for fabrics of vegetable or artificial fibres a fair number of products have been recommended for many years, amongst them several of the abovementioned, but these processes have not been used generally or have been considerably limited. Nor does literature show itself optimistic in this respect. See, for instance, information on pages 100 and 275 of Dr. W. Kind's standard work, *Bleaching of the Vegetable Fibres*, in which there are very valuable observations about the whole question of oil stains and many references to patents, processes, publications, etc. If one takes insufficient quantities of the fat solvents mentioned, the result is not satisfactory. If one uses sufficient quantities, the process is often too expensive. However, good bucking generally produces satisfactory results, but one must intensify and prolong the operation, and eventually buck twice if the goods contain many oil stains.

The best method of removing oil stains is by treatment with light petroleum, an operation which, however, is not very agreeable, but which nevertheless has become popular for certain articles, as, for instance, fine wool and rayon fabrics. Only it is difficult to remove the petroleum from the goods, which, however, can be done, though it is expensive, by a subsequent wash with some solvents.

In several plants the stains are only thoroughly dabbed with petroleum, or the goods are drawn through petroleum, and remain in this state several hours, so that the petroleum completely penetrates the fibres and thus promotes the loosening of the oil stains, enabling them to be removed at the subsequent wash with the products mentioned, or eventually by lukewarm washing with soap only. If the goods are dabbed with petroleum, great care must be taken that all rubbing is avoided, as this would cause scouring stains on the fabric.

The chief trouble with the use of petroleum, and also with certain other effective solvents, is that it is extremely difficult to emulsify it in aqueous solutions, as these solvents separate very quickly and are then completely lost for the cleaning process.

Thus, the problem is to avoid the decomposition of the emulsions of solvents and oils in aqueous solutions. This has been secured in a very clever way by mixing various cleaning agents in such a manner that the solution has a *specific gravity of approximately* 1. It is obvious that such an agent does not decompose in a watery medium. On this principle, one can combine all kinds of preparations at one's disposal and will do so always with regard to the prices of the products in question. This working method is especially favourable for the washing of the aforementioned light woollen and rayon fabrics, silk, half silk, etc., which must not be treated harshly. Such a mixture is, for instance, made of Trichlor Ethylene, Hexalin, Tetralin, and a fraction between petroleum and benzine, as used by many chemical cleaners, especially in America and in England, too, under the name "Stoddard Solvent Naphtha."

These mixtures are stirred up in solutions of a highly sulphonated oil, and the final mixture emulsifies perfectly in water and in this state somewhat resembles skim-milk. The emulsions can even be added to the bleaching liquors, and the goods can be pretreated on the jigger or the vat before dyeing, putting them even in dyeing baths.

The effect of this working method is that by retaining the specific gravity of approximately 1, a decomposition of the emulsion and especially a separation of the petroleum fraction which has almost the best cleaning effect is avoided. The emulsion keeps several days so that spent baths can also be used. Then again, these chemicals are easily washed out, especially in a weak soap bath to which advantageously may be added small quantities of highly sulphonated oils, etc., or sulphonated fatty alcohols, or sulphonated products derived from mineral oils.

From all these comments, it may be gathered that actually one is not yet able to make final proposals for the removal of lubricating oil stains, even if they are reduced to a minimum. Neither can one do without lubricating oils from which the stains are easily washed out, nor of methods that enable people to remove these stains in an easy and sure way. Nevertheless, there are already advances which have been made in this direction and from which the trade can profit with success, some of which, already having proved good in practice, have been described.

Finally, reference may be made to the extensive literature devoted to this question in technical journals, technical books, lectures, etc., of the textile industry. Several publications have already been referred to above. Here we quote especially the many and extremely useful publications which appeared in numerous volumes of the *Bulletin de la Sociètè Industrielle de Mulhouse*. This leading society, which is in close touch with practice, has especially kept under observation the question of the troubles of oil stains and their moderation.

A proof of this, and also of the great difficulty of the problem itself, is to be seen in the fact that the above Society has published a prize subject as far back as 1894 (No. 34 Bleaching), which concerns only a part of the whole problem. The prize question had the following text :—

"Practical methods for removing mineral-oil stains in cotton fabrics, caused in weaving. The process must be generally practicable and must not influence considerably the price of the bleaching operation.

By the methods of bleaching hitherto in use, mineral-oil spots cannot entirely be removed, and they appear in the dyeing and bleaching operations. A cleaning operation by hand will not be judged as a solution of the prize question."

It is significant that, at least by 1938, thus after more than 40 years, the Society was still not in a position to grant the prize. Further, there appeared in the reports a fair number of publications, elaborated in detail by first class experts, the perusal of which may be recommended to all those wishing to occupy themselves intensively with this question. In 1913, there appeared, for instance in the said *Bulletin*, pages 512-608, a very extensive report, introduced by a short review of the famous experts, Mr. Albert Scheurer and Edmond Wallach, entitled *Recherches sur les Taches d'Huile Minerale* and by reports of Mr. de Chambrier and final remarks of the above authors, with extremely instructive information. And the great series of reports was concluded by the statement that so far a solution of the problem has not been found ! !

In the April 1928 issue of the same *Bulletin* are extensive reports on the subject by Messrs. Mennecke and Picard, and a very detailed one, worth reading in every respect, by the renowned chemist-colorist, Mr. Victor Silbermann, of Messrs. Scheurer, Lauth & Cie., Thann (Ht. Rhin), which is also recommended for full consideration.

The researches of Mr. Albert Scheurer are of previous years, and one part of the standard publications of this prominent expert deals with the behaviour of oil spots during bucking of vegetable fibres.

Finally, reference should also be made to the studies published some time ago on the theory of the lubricating effect, using Rontgen research methods, which gave altogether staggering results.

Some very interesting researches have been undertaken by a French author, M. Jean J. Trillat, which were carried out in the Institute of the Nobel prize winner, Duke de Broglie, Paris, and about which details can be read in the journal *Metallwirtschaft*, Berlin, viz., in Numbers 4 of 27th January 1928, and 50 of 12th December 1930. According to all this information, the lubricating agent arranges itself, on rotation in the bearings, lamella-like between the metal parts, comparable to a pack of cards, and this in such a manner that the single lamellas are connected with each other systematically and gravitate towards the outside, that is the metal part. The presence of "active molecules" increases this effect and is accompanied besides by adhesion—or adsorption—phenomena, by which it gives special properties to the oil film formed in this way, which cause its greasiness, and for its part, creates the lubricating effect and the adhesion of the lubricating oils to the metal.

If there are contained in the lubricating agent so-called "active molecules," as, for instance, vegetable oil or fatty acid, also saturated alcohols and substances with methyl groups, etc., these more active groups are drawn at the piling of the lubricating film in the lamellas to the outermost layers of the lubricating film, and claw, so to speak, to the metal of the bearings, by which the intensity of the adhesion, meaning the toughness of the lubricating film, is increased, or, especially important for our case, the danger of spattering from the lubricating oil from the bearings is considerably reduced. If the "active molecules" are acid salts, the protection of the bearings against their corrosive activity becomes still more important.

One can gather from this what influence additions to mineral oil have on the suitability of a lubricant, and for this reason also reference was previously made to the fact that one cannot designate as dispensable without any more ado those ingredients of oils which cannot be considered chemically pure mineral oils. The problem can therefore not be at all regarded as solved, and is worth further study to find out which types of oil meet with the wishes of the textile industry as well as the requirements of the lubricating technique. Here, too, is great scope for research, the results of which could be utilized by the practice of the lubricant production, as well as by the textile industry. But in the meantime, one must remain satisfied with empiricisms, and try fully to utilize the knowledge which already exists about injuriousness and usefulness of oil compositions.

The Survey gives the technical situation of pre-war times and the writer hopes to add a supplement as early as possible to bring it up to date.

* * *

Correspondence

Why Not Mobile Unit of Experts ?

IN the course of a letter addressed to us on the subject of post-war planning and development, Mr. K. K. Madan, hosiery technologist, J. K. Hosiery Factory, Cawnpore, writes as follows :—

"The right type of technicians should be selected who would assist the various directors to build heavy industries in our homeland.

A mobile unit of experts should be set up under the planning scheme to advise the experts and proprietors of the already running concerns and manufactories as to the ways of improving the quality as well as the quantity of their products. These touring experts should be really intelligent persons who should be able to pick up knowledge while touring. If in one mill, factory or workshop they see a good point they should note it down to advise the person who is totally ignorant about it. This would relieve the employer in India who always likes to change his experts to get another idea from another factory. The appointments and dismissals of keymen should ordinarily be in the hands of the Government or a body of non-officials set up by the Government for the purpose. To control the experts is to control the industry itself. The interest of the working man should not be ignored and all facilities should be given for research work. The big industrialists should be encouraged to open big laboratories for the purpose and such establishments should be subsidized by the Government.

The labelling of prices on the goods should continue even after the war as this method has already been proved very beneficial and effective and has relieved the casual buyer to a great extent. The competition between the mill and cottage industries should at once be terminated at all costs by strong legislation and every effort should be made to raise the standard of living of our countrymen by giving compulsory education till the age of 15. Stipends for higher education at home and abroad should be liberal and all the young men, having intelligence above the average, should be able to take advantage of it. Last but not least, the methods of agriculture should be improved to a considerable extent. All this would help the cause of industrial emancipation of our country."

Treatment of Silk-worm Eggs

Some Practical Suggestions

By V. M. APPADHORAI MUDALIAR

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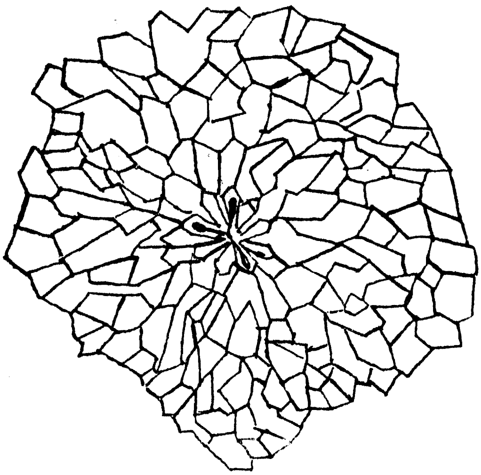
(Specially Contributed)

ANYONE will be under the impression that the surface of the fresh silk-worm egg is quite smooth, but it is not so; under a suitable magnification, the surface of the shell will be found to have innumerable deep lines in the form of polygons; these polygons are actually found to be embedded in deep furrows surrounded by a network of V-shaped canals crossing one over the other. At the junction of each of these crossings the shell has very minute perforations, through these perforations the embryo takes in fresh air and gives out carbon dioxide till the embryo fully develops and comes out of the egg as an ant-worm.

Plate A



PORTION OF SILK WORM EGG SHELL WITH MICROPILE IN THE CENTRE

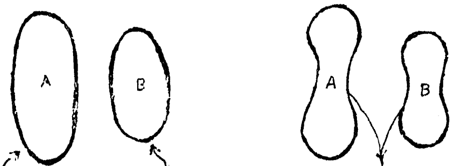
The shape of the egg remains intact without any change for a few days after the eggs are laid; within about a week the depression on the sides of the eggs will be noticed, the depression becomes deeper just prior to hatching, and all round the depression is the bulged out portion which is the fully developed embryo ready to hatch.

The position of the apertures made by the worm while hatching depends on the race of silk-worms. As a matter of fact, in the univoltine race of silk-worms, the ant-worm will make an aperture only on the side of the micropyle polar, either on the right or on the left side, whereas in the multivoltine races, the aperture made will be right in the centre of the micropyle polar.

The reason for this phenomenon is quite obvious. In univoltine races, the fully developed embryo will not be occupying the entire space available in the egg; there will be some space left in between the cephalic portion of the embryo and the micropyle polar; particularly on the 17th day of incubation the empty space could be seen clear and the embryo will be seen in the shape of the letter U. On the other hand, the fully developed embryo in multivoltines just a day prior to hatching will be found occupying the entire space in the egg, the cephalic portion will not only be quite close to the micropyle polar, but it will also be right in the centre of the polar.

Due to these peculiar positions the cephalic portion of the univoltines will be facing on any one side of the sub-polar; as such the ant-worm invades the shell and makes its aperture only in the sub-polar side. In the case of multivoltines, the ant-worm will invade only in the centre of the polar, hence the variations

Plate B



LONGITUDINAL SECTION OF SILK WORM EGG LAID FRESH (x 30)

CROSS SECTION OF SILK WORM EGG LAID FRESH (x 30)

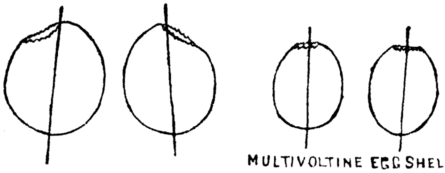
L & C. SECTIONS 6TH DAY AFTER LAYING THE EGG (x 30) in the position of the apertures in these two races.

It is immaterial whether the race is univoltine or multivoltine; they commence preparing their apertures by gnawing the shell and at the same time also consume the minute particles of the shell scraped just an hour or two prior to hatching. The minute shell particles consumed by the ant-worm serves as nourishment and gives the required vigour to scrape the shell at a stretch.

After hatching, the ant-worm will first evacuate the shelly particles consumed in the form of excreta in very minute particles. It is only after this evacuation that the ant-worm will start feeding on mulberry leaves. The aperture all round will not have a smooth surface, but in a saw-like denticles.

After the aperture is made, the ant-worm will first thrust its cephalic part of the body and by regulated movements of the body it comes out of the egg with ease.

Plate C



UNIVOLTINE EGG SHELL AFTER HATCHING WITH SUBPOLAR APERTURE (x30)

MULTIVOLTINE EGG SHELL AFTER HATCHING CENTRAL POLAR APERTURE (x30)

But in rare and exceptional cases rearers by chance might have observed that instead of the cephalic portion coming out first, the tail end of the body shows its appearance. This would happen only when the embryo or the ant-worm is weak. The weak ant-worm will not stand the strain of preparing the aperture at a stretch, but needs rest on and off; during the resting periods the embryo will keep on changing its position each time the embryo rests. This constant change of position causes the tail end of the body to come near the aperture. So the tail end finds a way out first; the ant-worm in utter confusion starts pushing the body in backward motion and succeeds in pushing out easily up to the thoracic portion. The actual struggle starts when the cephalic portion nears the aperture. Due to its being thicker than the rest of the body, the ant-worm cannot thrust this part of the body easily. Somehow the ant-worm tries with all sorts of contortions without any success, and succumbs in this struggle. If by chance, say, one in a thousand were to come out alive, it will be found fully exhausted and will not survive long.

The above facts make it clear that the health of the worms during the course of rearing mostly depends on the care and attention paid both by the graineur and the rearer and the treatment given to eggs from the time of laying to hatching. Many graineurs and rearers in India do not in the least realize that they are dealing with live eggs and they should take due care in handling them delicately. It is quite common for rearers, when they go to grainages to obtain their supply of eggs, to roll up the egg sheets containing millions of live eggs. The rolls right away go under the arm-pit and even in scorching sun; there cannot be a worse treatment given to eggs than this.

The eggs from the time they are laid and up to the time of hatching need very delicate handling both by graineurs and rearers, such as access to free ventilation, loose spreading of egg sheets, maintaining as far as practicable uniform temperature in the grainage hall, particularly in summer, loose packing while despatching the eggs by post and to avoid piling up examined sheets till they are checked for rejections, etc., are some of the points to which the graineurs should pay proper attention. After all, in grainages microscopic examination of mother moths is only a part of the technique; the points stated above are also as important as microscopic examination of moths.

In fact, grainages are the very foundation, on which the development of the silk industry depends. If the fundamental principles are not observed by the graineurs there is absolutely no scope for the industry in India to prosper. It is of the utmost importance for both the graineurs and rearers in doing their best for the industry to thrive and to be in a position to withstand keen and cut-throat competition from Japan and China after the war. It is never too late to do their bit with a view to obtain 100 per cent. success in their sphere of work.

Calico Printing in India and Its Future

By N. K. PATEL

(Specially Contributed)

THE ancient Indians were pioneers in the art of calico-printing and their block prints had a great reputation in Europe. With the recent technological advances in the West, this leadership was abruptly lost and, in the first quarter of this century, India became a dumping ground for imports of cheap machine-printed fabrics.

The Indian machine-printing industry, starting shakily at first, made rapid strides after the prosperity following the world depression of 1929-33. Imports of textile printing machinery rose steeply, particularly during the three years preceding this war, and to-day there are over three dozen printing machines of foreign make in India, besides several of a rather crude type, made locally under the war impetus. Most of the imported machines are four-colour, and an odd few are six-colour. Normally most of the plants work two shifts, and according to rough estimates they print, on an average, approximately 200 million yards annually. This is the same as before the rise of the local industry in 1936, since when the imports had fallen to about 150 million yards.

This rapid progress was mainly due to the introduction, meanwhile, of easily applicable fast dyestuffs, specially adaptable to printing, such as the Rapids, Indigosols, Naphthols, and improved Vat dyes (in a more suitable state of physical sub-division or fineness to facilitate easy fixation). These dyestuffs did not require the same exacting skill and elaborate technique as that called forth in the application of older dyes, and gave scope for easy and rapid production, besides being more versatile in their use in obtaining varied colour effects. This upward trend would have no doubt continued, had it not been arrested by the abnormal conditions brought about by the war.

Indian mill production, though boasting of a good yardage, approximating that of previous imports, has, however, shown little signs of departure from the easily turned out straight prints in the direct style, on cheap voiles, chintz, etc. Single-colour prints, though gradually yielding to two and three colours, still comprise a large proportion of the total output, while the proportion of four colours continues to be negligible. The competition between the various mills is not in different specialized styles, but tends to get crowded into this limited field. They have not yet thought of striking any new or original line and, with very few exceptions, they have not even attempted to enter the market of imported varieties. A printing machine is capable of a huge output in these straight prints and, if such unprogressive trend continues, with further inevitable multiplication of machines after the war, a stage may easily be reached when the fittest only can survive. The likelihood of foreigners dumping in India the same type of prints as that locally produced is also another possible menace, which should not be lightly ignored. In fact, just before the war, Japan had already begun to make such attempts.

The type of prints produced by the Indian mills did not replace the imports, and had to create a new market for itself. No doubt, its indirect impact reduced the imports of specialized foreign styles to about $\frac{3}{4}$—$\frac{2}{3}$ of the original. This was mainly at the expense of the U.K., who at the same time suffered a further and more serious blow from severe Japanese competition. The latter, making rapid inroads in the Indian print trade, quickly wrested the export leadership from the British who had been enjoying a virtual monopoly. Latterly the Japanese exports also suffered some decline, as the Indian production mounted steeply, just before the outbreak of the war.

Almost all the specialized imported styles have, as a rule, a deep ground shade, either dyed or blotch-printed, on which stand out characteristic designs in more or less stereotyped white and multi-coloured motifs, which are peculiar to each particular style. This is in old oriental taste and, in many cases, the exporters have merely copied the old Indian hand-printed traditions and exploited them with modern machines and dyes. The ground shades are generally in Alizarine red, chocolate, and deep purple; Para-red, Alphanaphthylamine claret, and Metanitraniline orange on Beta-naphthol ; Indigo ; Aniline or Logwood black ; or the cheap and bright but loose basic dyestuffs according to the style. Alizarine is now being increasingly replaced with azoic combinations and each style has its own regional markets in India.

(A) Basic Styles

(i) White tannic discharges, or the "Acid-tannics," subsequently dyed up in bright grounds of basic pink, blue, turquoise, green and violet. To complete the assortment, ground shades of aniline (or direct) black, para (or Benzo) red, and alpha (or direct) claret are also included in the range. The designs are usually in white spots, checks, or stripes.

(ii) "Printed drills" in "Vat-tannics." The design is in four colours, in white, and vat yellow, green, blue, salmon, or overprinted black. The bright ground shades are dyed in basic blue, violet, pink, and turquoise, with para-red and meta-orange to complete the range. This is a difficult and tricky style, requiring expert technique and supervision.

(iii) Basic blotches. The grounds are as in (i) above, but blotch printed instead of dyed. The design is in white, and two other colours from the ground assortment. The four-colour effect is similar to (ii), but the process is simpler, and the use of costly vat discharges is avoided. A particular grape design is quite popular in this style, known in the trade as the "Grape quality." (ii) and (iii) may have vivid single borders (Gagra-pat) for skirts, and these are also produced on cheap rayon.

The basic styles were latterly almost entirely cornered by the Japanese. These have a wide sale, due to their cheapness, attractive finish, and bright though loose colourings.

(B) Aniline Black

These styles were also similarly cornered by the Japanese.

(i) Single coloured white designs on black ground.

(ii) Multi-coloured design on black ground, in white, and the bright basic pink, yellow, green, etc., in four colours. In both the above styles, the white is usually in a fine stipple, producing a characteristic effect on the black ground, named as "silver grey" or "steel grey."

(i) And, to a smaller extent, (ii) have been produced in India principally by the J. K. Mills of Cawnpore.

(iii) White ground prints. The design is a direct print of Aniline (or Logwood) black alongside red if required, in the two-colour assortment. The white is sometimes covered up with a bright yellow ground in a portion of the assortment.

(C) Alizarine Styles

These are now being increasingly imitated in the azoic combinations, to shorten the process.

(i) Chocolate jeans and shirtings, mainly from the U.K., but with increasing competition from Japan. The grounds are blotched in appropriate mordants, and subsequently dyed up in Alizarine to give chocolate, red, or deep-purple (almost a reddish black), leaving a design in white. For two-coloured designs, pegs in one of the remaining shades other than the ground, are printed within the white. A portion of the chocolate assortment has a bright yellow to cover up the white effects. The British Calico Printers' Association are known for their excellence of work in this style, under their trade mark "G.D.S." Latterly this style has been increasingly imitated in Azoic chocolate and red, and Logwood or Aniline black. The cloth is usually in splits. The Bombay Dyeing and Manufacturing Co. (and some other mills in fewer designs) produce this style in India, and there are signs that it will be increasingly taken up locally, in direct competition with the imports.

(ii) Chocolate (red and purple) *saris* in single colour ("Gavan"). These are on the same lines and colouring as above, but on altogether different designs and cloth, with side and cross borders. There is little competition from the Japanese, who have not gone in for cross-border sari-printing machines to any serious extent as yet. The same are also available in alpha-claret and para-red.

(iii) (*a*) Turkey Red gagras, jaconets, scarfs, etc. The ground is a deep shade of Turkey (Alizarine) Red, with allover uniformly spaced pink spots, and illuminated in vivid designs of pigment yellow, green and white. The characteristic designs are mostly geometric rather than floral. The style is produced without borders, or with single side border, or additional cross border also if required. The British firms, F. Steiner and the United Turkey Red Co. (The U.T.R.) are known for their high standard of excellence in this style. Latterly, it is being increasingly imitated in Azoic Red. In India, it is being solely produced by the Bombay Dyeing and Manufacturing Co. without the cross border. A variation in this style has pink in large floral designs instead of in spots, and sometimes a black colouring in the border in place of red.

This style is also extensively imported in the cheaper para-red, but with the omission of pink.

(*b*) " Acid red and pink " scarfs, handkerchiefs, etc. The ground is Turkey (or Azoic) Red, with large floral and pastoral designs in white (" Acid ") and pink, with or without borders.

(D) Para-red Style

(i) The gagras, jaconets, etc., have been noted above. There is a large variety of prints besides these, differing in designs and cloths, in the same colourings with additional blue and black to choose from. While the yellow and green in Turkey Red styles are usually pigments, these in Azoic and Para-red may be pigments or basic.

(ii) Para-Red *saris*. Some are on the lines of chocolate *saris* mentioned previously, but are dyed in para-red or alpha-claret, the design in white being a printed discharge or resist. Other para *saris* have small peg designs of yellow (with additional green at times) in the filling, and spectacular side and cross-borders in yellow, green, blue, black and white. The so-called " Peacock *saris* " have small peacocks in the side borders, and a single big gorgeous peacock in the cross-border.

(iii) A prominent blotch-printed style in para-red and meta-orange is on the lines of chocolate jeans, on poorer cloth, and different type of designs, with pegs of Logwood black within the white. The J. K. Mills of Cawnpore, and latterly the Ahmedabad New Textile Mills, produce this in India. Para-red and Logwood black alongside if required, are also printed in small designs on white ground, subsequently covered up with a bright yellow, in a portion of the assortment. (See B iii.)

(E) Indigo and Turkey-Red Blouse-prints

The ground is a medium depth of Indigo or Alizarine Red in blotch, and the design is in white, and dead-fitted objects in a much darker shade of the same ground colour. These are also imitated in azoic and chrome colours in a more varied assortment of shades.

(F) Japanese Chintz

These in single and multi-coloured designs, similar to the work of Indian mills, but mostly in looser basic or chrome dyestuffs began to make their appearance just before the war. Vat and basic discharges on medium tints of direct grounds, in modern pleasing designs on rayon were also being imported from Japan. Fancy prints on silks, and superior cotton fabrics were so few in the total yardage, that they may be neglected.

Should the Indian industry turn to these old-established styles to expand its scope, or strike new lines in colourings, designs, and styles ? The consumers' taste, though somewhat traditional, is bound to follow the changing times, being educated and moulded by what creative and enterprising manufacturers and merchants can offer for sale. With the growing appreciation of modern dyestuffs in respect of fastness, the demand for imported styles, most of which are wholly or partly in loose colours and in outmoded designs, will be questionable. Red, chocolate, deep-purple, blue and black have been among the favourite ground shades, only because these were the only deep prints available at one time with the vegetable dyes, alizarine, indigo, and logwood. Moreover, some of the cheap imported styles such as the basic, aniline and para are highly competitive, and the Indian industry will do well to strike new lines as well, and explore the vast possibilities of modern dyes and designs. To give one outstanding example, the bright and fast variamine blue whose unique versatility allows it to be direct-printed, discharged or resisted in various colours with equal ease, has been extensively exploited in the West, but totally neglected in India, where it offers a virgin field to be exploited in the right sort of designs. Among other styles which can be profitably introduced here may be mentioned, multi-coloured vat discharges on Azoic, and resists under medium Indigosol grounds ; glistening metallic prints on dark dyed grounds, etc. In recent times the scope of application of the fast azoic and vat dyes has been considerably widened by such preparations of them as the Rapids and Indigosols. Applied and developed under different conditions from the parent dyes, they enable more varied print effects to be produced than was hitherto possible.

Printed Saris

Another vast field is printed *saris* in modern pleasing designs and colourings, with spectacular side and cross-borders, so beloved of Indian ladies, but obtainable only in crude local block prints. This would, however, require special *sari* printing machines, with the so-called "dancing rollers" and skilled specialist *sari* printers to run them. Apart from the costly machines, the *sari* printers' bugbear is the large investment in print rollers, because the filling, side borders, and cross-borders require separate sets of rollers for each colour in the same design. However, in view of the high return, the whole question is entirely one of enterprise and imagination. It is odd that while such machines were invented abroad to satisfy Indian markets, the few machines that have been installed in India are wasted on the production of ordinary cheap prints.

Among other fields may be mentioned: printed shirtings, coatings, handkerchiefs (special machines), furnishing fabrics, etc., in appropriate designs and colourings. The scope of multi-coloured prints now being produced here, can also be substantially widened if more attention is paid to novelty and imagination in designing, balance in colouring, range of shades, the appropriate tinting of white ground prints, etc. One cannot too strongly stress the role that artists and designers can play, alongside technicians, industrialists, and merchants in the future growth of the industry.

For proper growth of calico printing in India, a local industry for engraving and repairing of copper printing rollers is absolutely essential in each manufacturing centre. Bigger printing establishments may advantageously set up their own engraving plants, if they can keep them well occupied with their own work, supplemented with outside jobs when necessary.

Dyes (and chemicals) are a substantial item in the cost of printing, in which the cost of labour is of minor significance unlike textile manufacturing. Therefore, one cannot overlook the need of a national dyestuff industry in due course, producing at least the staple dyes most used in India for dyeing and printing, if we have to meet possible foreign competition on more level terms. One must have noted how Japan benefited by its own dyestuff and chemical industry, made a sensational progress in calico printing, and became a menace to the U.K., the pioneers of machine printing and of practically all export styles. Eventually the manufacture of printing machinery and auxiliaries of satisfactory quality in India can complete the picture.

The Future of the Industry

The Indian textile industry has so developed that the cloth is manufactured and printed in the same mills. Calico printing is a specialized industry, and in the West it is separately carried out by specialist printers. They either purchase their own requirements of cloth from weavers or warehouses, print and sell on their own account ; or, as "commission printers," they print the cloth for a merchant (called a "converter") on his account on payment of agreed printing charges. In either case, the printers carry out their specialized trade of printing only, and not of manufacturing the required cloth. In India, while commission printing has grown during the war mostly in small factories with locally fabricated plant, the spinning and weaving mills who have put up a few printing machines, view it as a side line providing a regular outlet for some of their looms, or a device to dispose of cheap cloths at better profit after printing. Each structure of industry has its own advantages and disadvantages, and it is for the industry to decide what is best for its growth. A compact manufacturing and printing establishment, weaving solely and specially for the express purpose of printing, would seem to be a good compromise.

In a land of colour and pageantry such as India, with its rising population, and possibilities of rising standards of life as envisaged by economic planners, the calico printing industry, among others, has bright prospects. Some parts of India, such as the southern peninsula, have not by force of tradition, yet taken to printed apparel, preferring dyed woven material instead. They are waiting to be made print-minded, and there are good prospects of export to the near Pacific, African and Middle East markets.

The Australian Textile Industry in Wartime

BY ALEX J. BENNETT

(Specially Contributed)

FOLLOWING upon our recent article in this *Journal* under the above heading, we would like to strongly emphasize that during the present war the industrial conditions and circumstances are exactly reverse to the conditions obtaining during the 1914-18 war.

Although during 1914-18 woollen and clothing were amongst our most important secondary industries, they were not self-contained. Practically all woollen yarn for socks, cardigan jackets, and underclothing had to be imported for there was only one firm in Australia equipped with machinery capable of all stages of manufacture. The clothing trade also had to import all accessories. Expansion of industry then was handicapped by the impossibility of obtaining necessary machinery from abroad—as an instance, a firm at Geelong awaiting plant had three consecutive consignments of power looms sent to the bottom of the ocean by enemy action. The civil population in the last war experienced continuous and serious shortages of essential commodities and so the Commonwealth was quite unable to make any important contributions to Empire war efforts.

Present Position

To-day the picture is entirely changed, and despite the man-power shortage Australia is able not only to equip and clothe her own immediate and neighbouring fighting and civilian services but also to export textiles to other parts of the Empire. Under present war-time stress Australia has gone into production of almost every conceivable type of textile fabric, including cotton, linen, silk, carpet, felt, and composite materials not previously manufactured within the Commonwealth.

Although Australia is generally considered to be a primary producing country, her factories now employ 600,000 hands and from their annual output valued at £500 millions supply about 85 per cent. of the manufactured products consumed by the population of the Commonwealth, and except in a few instances all have been developed for production of normal peace-time requirements.

Speaking primarily of textiles, the advance has been most marked by the erection of immense self-contained woollen and worsted, silk, and cotton piecegoods factories, whilst those existing plants have been in most cases considerably enlarged: bringing up the production of these goods manufactured to three times greater than in pre-war years.

Latest Statistics

Here are the latest statistics regarding the textile industry:—The number of textile and textile goods factories in the Commonwealth total 705. The value of output of these factories total £44,782,623. The value of production of these factories is no less than £17,936,299. Because wool is her chief raw material (just as cotton is India's chief fibre of industry) Australia must fundamentally remain a woollen and worsted manufacturing country—however, there has been considerable development in cotton piecegoods manufacture.

. Since the outbreak of war and the sudden cessation of Japanese imports of cotton goods, large cotton mills have been erected in Sydney, Melbourne, and Adelaide,—over the past two or three years. Spindles have increased from 73,000 to nearly 200,000 and most of these are operating double shift.

One company operating in Melbourne and Sydney has increased its capital from £116,000 to £660,000: another company with mills in three States has a paid-up capital of £726,000—four other companies have paid-up capital of £520,000. A new company in South Australia for manufacture of sheetings, pillow cloths, twills and dyed piece cloths has a capital of £600,000—it will directly *replace those commodities which formerly* came from Japan.

Irrigation plants have been installed by the Queensland Government to grow more cotton which at present is totally inadequate for local consumption. In 1940 50,000 bales of 500 lbs. of fibre were used, but the present requirements are about double that figure.

Rayon and Synthetic Fibres

Efforts to establish the rayon industry in Australia have not received much encouragement, and permission on behalf of promoters of this industry to import necessary machinery from America was recently refused by the Customs Department.

The synthetic fibre industry would hardly be countenanced by the Commonwealth Government, as the wool industry particularly at the moment is strongly up in arms against what it considers its most potential competitor. The Australian Wool Board is now pressing for legislation to label contents of all apparel displayed for sale. There is at the moment in Australia a general public outcry that the present single-wefted fabrics, or standard cloths, are so inferior that the good name of Australian cloths is being jeopardized in the public eye, also that synthetic fibred cloths are making headway as a result. Following an inquiry by the Tariff Board, manufacturers are to be allowed to make a certain percentage of better class fabrics. It is also resolved that repatriated service men are to receive better quality suits than have been issued hitherto. In face of the better war position on all fronts the tendency here is to revert to more normal business conditions in this regard.

The flax growing industry has been greatly stimulated by Government since all former supplies were cut off, the linen and cordage industries have also made great strides. The silk weaving industry, chiefly for parachute silk fabric, has been successfully established in Melbourne. There are, of course, an endless variety of textile sidelines such as glove manufacture, webbing, braids, elastics and laces now being manufactured *for the first time in Australia—all brought to* fruition as a result of war-time needs.

It is indeed a characteristic of the Australian, born of pioneering forefathers, to enter into new spheres of industry with the same courage and determination which has marked her fighting forces in the jungle and in the desert.

Projected New Mill

We could give no better instance of this to our fellow textilists of India and elsewhere than to describe the founding and establishing of the Returned Soldiers Mill at Geelong—it is a similar story which could be told in regard to almost every other textile mill in the Commonwealth.

The story of the founding of this mill will be told in our next article.

Note.—As we are about to post this article, word has come through from Canberra of the Government's decision to establish at Newcastle a textile manufacturing concern on a major scale. The Federal Government has agreed to lease to Tapitex Pty. Ltd., a portion of a large munition factory for conversion to a textile factory. Mr. Curtin, the Australian Prime Minister, said that the textile products to be made here were formerly imported from abroad—much of them from Japan—and the enterprise meant actually the establishment of a new industry in Australia which, when fully developed, should employ some 2,500 hands. Ultimately the capital involved would amount to £1,500,000." As the manufacture of rayon and artificial silk will form an important part of the output from this mill it would appear that the opposition to synthetic-fibred fabric manufacture in Australia (as referred to above) has been overcome. It must be remembered that there are vast resources of soft pine woods available here as raw material for the synthetic textile industry and henceforth Australia may manufacture her own artificial silks and fabrics for the first time under the impetus of war.

Eighty Fellowships in Science

I.C.I.'s Gift to Nine Universities

THE directors of Imperial Chemical Industries have offered to provide at nine universities in Great Britain 80 Fellowships to be held by senior workers in certain sciences. The scheme is announced to operate for an initial period of seven years. The Fellowships will be of the average value of £600 per annum, though the universities will have power to determine the emolument for each particular appointment. The Directors of I.C.I. have described on broad lines the subjects in which the Fellowships are to be held and the administration of the scheme rests wholly with the universities, which will select and appoint the Fellows, subject only to such conditions as to duties and tenure as the universities themselves impose.

The purpose of the Directors in instituting this scheme is to strengthen the general provision in the British universities for scientific teaching and research. The Directors believe that academic and industrial research are interdependent and complementary and that substantial advances in industry cannot be looked for without corresponding advances in academic science.

In their view it is important that the immediate objective should be the strengthening of university scientific departments in whatever way each university thinks to be best. No conditions whatever are attached by the Directors to the tenure of these Fellowships. The Fellows will be members of the university staffs and will be concerned only with the duties laid upon them by the universities. Their primary work will lie in research. But they must also take some part in university teaching. It is intended not to relieve the universities from the cost of maintaining any part of their normal work but to enable them to add to what they already do.

The nine universities to which this offer has been made comprise the larger metropolitan universities and those which have a close geographical relation to the main centres of the company's production. Twelve Fellowships each have been offered to the Universities of Oxford, Cambridge, and London, eight each to the Universities of Glasgow, Edinburgh, Manchester, Birmingham, and Liverpool, and four to the University of Durham.

The Directors believe that a rational policy of this character, together with a wise selection of men both as regards capabilities and tenure of office will lead to the emergence of a body of men capable of taking high academic or industrial positions, thereby advancing academic and industrial research.

Lord McGowan, in a letter to chancellors of universities, says: " Nearly three generations of experience of the administration and conduct of research have convinced us that academic and industrial research are interdependent and complementary and that it is useless to expect substantial advances in industry without corresponding advances in academic science . . . It is reasonable to assume that if our scheme works well others may feel disposed to make similar subventions. Parenthetically, we have taken it for granted that appointments will be made without any discrimination as regards race or nationality."

—Manchester Guardian.

Mango Nut Powder for Sizing Yarn

MR. S. G. CHOWDHARY, B.Sc. (Ind. Chem.), acting Manager, Moon Mills Ltd., Bombay, writes:—

At this critical juncture when there is acute shortage of foodstuff all over the country, the availability of starches for sizing purposes has become a serious problem. Introduction of tamarind seed powder has been a great help in meeting the situation for some time past. But, according to the latest information, even this substance will not be available for the purpose to the required extent, because it is now being used as food material.

May I suggest through the columns of your esteemed periodical that researches should be made at the various technological institutes to see if the powder of mango nut could be used for sizing cotton and jute yarn in place of starches. As a student of chemistry, I feel it can successfully be used for the purpose.

Hospital For Mill-workers

Dr. Alagappa Chettiar's Gift

THE foundation-stone laying ceremony of the mill hospital attached to the Cochin Textiles, Pudukad, was performed by Sir George Boag, Dewan of Cochin State, on 27th October 1944. Dr. Rm. Alagappa Chettiar is constructing this hospital for the benefit of the labourers of the Cochin Textiles and it is located in the spacious grounds in front of the mills and will have 12 beds. It is expected to be ready for use early in the new year.

Dr. Alagappa Chettiar read the messages received wishing the function all success, including one from H. H. the Maharaja of Cochin.

The Hon'ble Mr. T. K. Nayar appreciated the noble ideals of Dr. Alagappa Chettiar of distributing wealth to the poor and hoped his example would be emulated by others in Cochin State.

Dr. Alagappa Chettiar then announced that H. H. the Maharaja of Cochin had permitted the association of his name with the institution, which would be named the "H. H. Maharaja Ravi Varma Cochin Textiles Hospital." Sir George then unveiled a portrait of the Maharaja.

Addressing the gathering, Sir George Boag said that Dr. Alagappa Chettiar had already given many tokens of his munificent generosity in the State. They were at the present moment beginning to put into operation a technological course in the Maharaja's College at Ernakulam, which was due to his generosity. Dr. Chettiar, in his relations with his labourers, was setting an example which all employers of labour within the State and throughout the country would do well to follow. Business after all was not merely a money-making affair. It was a human relationship. An ideal employer of labour, both a small as well as a large employer, did not regard men, women and children who worked for him as so many parts of the machinery of his factory. He regarded them as human beings with human feelings and human needs. The necessity of adequate medical assistance at hand in mills like the Cochin Textiles, especially at the present time, when men, women and children did not always enjoy perfect health, had been fully realized by Dr. Chettiar and it should be much appreciated that he had launched on this scheme of providing this very useful amenity for them.

Group photograph taken on the occasion. Sir George Boag is seen garlanded in the middle with Dr. Alagappa Chettiar on his right and the Bishop of Trichur on his left.

Bombay Industrial Court at Work

Digest of Important Decisions in 1944

BY PRABHUDAS B. PATWARI, B.A., LL.B.

(*Specially Contributed*)

1. *Employee Defined.*—There is a distinction between the expressions "employees of the textile mills" and "persons employed in connection with the textile industry." The former obviously means persons actually employed in the cotton textile industry while in the latter the connection between the textile industry and those persons is not necessarily so close. (App. No. 108 of 1943.)

2. *S.* 28: *Sch.* II (i): *Closure of a whole shift without Notice. Famous Calico Mill case.*—In a third shift functioning for some months in the years 1941 to 1943 but which was purely a temporary affair, a notice of one month for its discontinuance under Standing Order No. 9 is not necessary and, therefore, a closure of the third shift did not involve any reduction of a permanent or semi-permanent character in the number of employees. An operative by finishing two months' probationary period, or even a longer term, does not become entitled automatically to the status of a permanent operative. (App. No. 163/1943.)

3. *Strike.*—It is true that some out of many workers might not be in favour of a strike but the question has to be determined not with reference to what their view of the strike was but with reference of their actual conduct; otherwise every one of the workers could come and say that he himself was against the strike but that he refrained from coming to work because other persons were striking work. (App. No. 148/43.)

4. Where the whole mill had to be closed on account of stoppage of work by the employees it was contended that there was no concerted action and, therefore, there was no illegal strike. The Court held that it is impossible to believe that each one of the workers would stop working one after the other without concerted action on their part. Admittedly the stoppage of work was meant as a protest and that there could not have been almost simultaneous stoppage of work unless the workers resolved through their leader that they must stop work. (App. No. 228/43.)

5. *S.* 73 (2): *S.* 77 (2): *Contracting out.*—If the employees enter into a specific agreement with the mills, contrary to the Award, the Court can take no notice of it as contracting out of a settlement or an Award is not allowed under section 77 (2). The section refers only to a contracting out of a registered agreement. Award cannot be changed or modified even by the mutual consent of the parties thereto. (App. No. 121/1943.)

6. *Sch. II* (9): "*Ex-gratia*" *Payment not Wages.*—The word "wages" imports the idea of legal liability on the part of the employer to pay a definite and well settled consideration arising from a legal relationship of employer and employee. But *ex-gratia* payment to a few of the workers in addition to the specified rates of wages having no relationship whatsoever either with the amount of work done or efficiency or good attendance and which may be withheld at the option of the employer cannot be regarded as wages. (App. No. 158/43.)

7. *Sukhdai and Extra Bonus.*—The staff of the mill company is not entitled to these things as a matter of right. It depends entirely on the discretion and goodwill of the management. (App. No. 162/1943.)

8. "*Force Majeure.*"—The words *force majeure* are not defined in the B.I.D. Act and must be given its ordinary dictionary meaning which is "irresistible compulsion." The word does not necessarily refer to an act of God but to all circumstances which are beyond the control of the party which claims the protection of *force majeure* clause. "The term is used with reference to all circumstances independent of the will of man and which it is not in his power to control; war, inundations, epidemics, strikes, embargo and even a breakdown of machinery through accident were deemed *force majeure* (1920) 2 K.B. 714." In App. No. (16/44) it was held that shortage of chemicals due to war conditions and Government control was held sufficient

justification for temporary stoppage of work. Reduction in the number of employees owing to circumstances arising on account of war and beyond their control must be held to be due to *force majeure*. It requires no notice of change. (App. No. 153/1943.)

9. *Assistant Weaving Master* cannot take advantage of the Standing Orders for Operatives as he is not an operative. (App. No. 199/43.)

10. *Permanent Operative.*—Though a worker may be in the service of the mills for three months he thereby does not become a permanent worker. (App. No. 157/43.)

11. If the employee could not properly fall within the scope of the definition of other operatives as defined in S.O. No. 3, he cannot be regarded as permanent operative unless he satisfies the conditions laid down in the definition of a permanent operative. (App. 157/43.)

12. *Discharge Notice.*—The services of an employee who is not really a permanent one can be dispensed with by the mills without any notice. So a *badli* worker can be discharged without notice (157/43). Even for a permanent operative this order does not seem to contemplate a written notice except in cases where the operatives desire a written statement of reasons for their discharge but S.O. No. 25 requires a written order in the form prescribed when a permanent operative is discharged. (App. No. 113 to 116 of 1943.)

13. *Reason.*—As to what constitutes " reason " within the meaning of S.O. No. 19 (*a*) has not been defined in the Standing Order. An operative may be discharged for any reasons even other than those mentioned in S.O. No. 21. Whether the reason is sufficient or insufficient is not a matter for the Court to decide. (App. No. 165 of 1943.)

14. It is not open to the Court to sit in appeal over the decision of the manager of the mill and go into the question whether the reason assigned by him for terminating the employment of the operative is a sufficient reason or a reason at all under S.O. No. 21. (App. No. 146/43; App. No. 8/44.)

15 and 16. *Service of Notice.*—If for any reason the employee makes it impossible for the mills to serve a notice on him personally, the notice should be sent on to the Labour Officer who is a representative of employees (App. No. 72/43) or there should be an endorsement to that effect on the notice in the natural course of things. (App. No. 192/1943.)

17. *Discharge and Dismissal.*—It is not true that wherever there is misconduct on the part of the employee, the mills must only dismiss him and not discharge him. It is open to the mills either to discharge him or dismiss him as laid down in S.O. No. 19 or S.O. No. 22 respectively. (App. No. 93/1943.)

18. Collection of union subscription by a representative union from the members of the union within the mill premises cannot thereby automatically be a purpose sanctioned by the manager within the meaning of this Standing Order except in Ahmedabad. (App. No. 93/1943.)

19. *Negligence of Work.*—Where an operative was suspended for one day for negligence of work it was held that mere negligence of work is not a misconduct under S.O. No. 21. It says that habitual negligence or neglect of work is misconduct. It is hardly necessary to point out that negligence is one thing, whereas habitual negligence is quite a different thing. In these circumstances, the operative not having been charged with any misconduct, he cannot be found guilty of any such misconduct and cannot be subjected to a suspension on that account. (App. No. 205 of 1943.)

20. *Dismissal.*—As in this order the word " operative " is used without any qualification, the provisions of the order would apply to all operatives whether they be permanent or temporary. Therefore, a temporary worker also cannot be dismissed without any notice, etc. (App. No. 122/43.)

21. *Discretion of Management.*—The Industrial Court is not a court of appeal against the orders passed by the managers dismissing their employees after holding an inquiry as contemplated by S.O. No. 22 and it is not open to the Court to consider whether the circumstances of the case justified the passing of a particular order. (App. No. 142/1943.)

22. Manager's signature on the dismissal slip should not be a mere mechanical act. The manager must apply his own mind to the merits of the case before awarding punishment. (App. No. 87/1943.)

Cloth and Yarn Prices Reduced

Textile Control Board Chairman's Announcement

A SCHEME for the distribution of cloth on an all-India basis, which would reduce to the minimum, if not altogether eliminate, the black market in the cloth trade, has been agreed upon after prolonged discussions between representatives of the Government of India and members of the Industry's and Distribution Committee of the Textile Control Board. It was outlined by Mr. K. M. D. Thackersey, Chairman of the Textile Control Board, at the meeting of the Board held in Bombay on Thursday, the 25th January. The following are extracts from Mr. Thackersey's speech :—

" At the meeting held in October last, I had indicated to you that the Industry's Committee had decided to revise the schedule for the fixation of ceiling prices for all types of cloth manufactured by mills on a more rational basis, removing the various anomalies which had then become apparent by the application of the original schedule. The ceiling prices for all qualities at present manufactured by mills in India on this revised basis have now been re-calculated and are being sent out to the mills with instructions that they will form the basic prices to be stamped on all such cloth produced by them on and after 1st February 1945. The Industry's Committee have since given further consideration to these levels of prices, and I am glad to be able to inform you that they have recommended that these new basic prices should bear a further reduction of 5 per cent. with effect from 1st February 1945. This reduction, broadly speaking, is to be applied to all cloth manufactured with warp counts 50s and under. In the case of yarn, the ex-mill ceiling prices of counts 16s and over (and upto 45s) manufactured from Indian cotton are to be reduced with effect from the same date by one anna in the rupee.

" No reduction has been recommended in the case of superfine qualities of cloth and finer counts of yarn owing to a substantial increase in the prices of Egyptian cotton and also for the reason that an incentive has been left for mills generally to increase their production as far as practicable with a view to meeting the present acute shortage of such materials. The Export Committee have further recommended that the quota of fine cloth of 48s warp and over at present exported out of India should be substantially reduced. It is hoped that these measures will go a long way in ensuring fair supplies of available fine cloth to the consumers of this country.

Difficult Coal Situation

" During the period under review, production has run at a fairly high level despite the increasing difficulty of maintaining supplies of coal to producing centres. The situation has considerably worsened during the last month when due to cold weather the coal consumption in all mills increased very greatly ; whereas about 160,000 tons of reasonable quality coal is barely sufficient to keep all mills in production in a normal month, at least 190,000 tons of reasonable quality coal per month is required to keep mills in production during the cold months of December to February. Last year mills were able during these critical months to draw considerably on their stocks, but this year the stock level has fallen so low that this was not practicable. The loss of production during the month of December last is in the neighbourhood of 25 million yards which is the highest on record. The position in January this year is going to be the same. I do realize that the Hon'ble Sir Akbar and Mr. Patel are doing their very best to see that the textile industry gets the fullest possible share. In spite of their efforts, however, the position for one reason or another remains obscure. I do not think it will be out of place here for me to make a few observations in regard to the significance of coal shortage on the textile industry and other industries. In the first place, the country is experiencing an acute shortage of consumer goods including cloth. If proper facilities are not provided to feed markets with these goods, in the face of inflation which is moving at a quick pace, there is likely to occur a major economic crisis in the country. Secondly, the closure of mills would mean dimunition of demand for raw materials like cotton which in turn is bound to affect the interests of the farmers to help whom Government itself is buying certain amount of cotton in the open market. Last but not least is the concern of the workers regarding the unemployment that will be thrust on them for no fault of theirs owing to lack of coal supplies. The situation is undoubtedly grave, and unless urgent and drastic measures are taken, I am afraid all our efforts to ensure satisfactory working of control will be of no avail. I, therefore, submit in all sincerity to Government that every effort should be made to rush on a high priority basis immediate supplies to mills either by stopping exports of coal, if they are still continuing, or by procuring more coal by any possible means.

New Scheme of Distribution

"In my last quarterly review, I had given you a gist of the distribution scheme to be introduced in Bombay City with the object of ensuring an adequate distribution of cloth to the various surplus and deficit zones as defined under the Cotton Cloth Movement (Control) Order commensurate with the population of those zones. Although the scheme worked fairly satisfactorily in Bombay City for some time under the able guidance of your Bombay Cloth Distribution Panel, the fruits of its labours were, however, imperilled owing to the menacing growth of black market activities. You are already aware of the warning given early in December by the Hon'ble Sir Akbar to the dealers that if they do not set their business in order within the next few days Government will not hesitate to take steps to enforce control, if necessary, even by assuming complete control over distribution of cloth direct from the mills. At the same time, in an effort to eradicate black market in Bombay which is one of the major producing centres for cloth, on the advice of the Bombay Cloth Distribution Panel, the Textile Commissioner has had to introduce about the middle of December last a purely temporary and emergency scheme, brief details of which are being circulated to you separately. As far as the Ahmedabad producing centre is concerned, the Ahmedabad *Mahajans* assumed full control over quota holders and enforced distribution to various Provincial Centres at controlled rates on the basis of their transactions in the basic period 1940-42. Punitive action has been taken against certain defaulters for contravention of the control measures.

"These emergency steps, I must admit—and this statement will, I am sure, be corroborated by the Textile Commissioner and those who have had an opportunity to study the situation—have had a salutary effect and have very largely tended to remove black market practices in Bombay. Reports from other producing and consuming centres, however, indicated that black marketing and profiteering were very rampant. The main reason for this state of affairs appeared to be a lack of a central distribution scheme and distribution arrangements within each Province co-ordinated to and falling in line with such central distribution scheme. I am glad to be able to tell you that following my protracted discussions with Government, the Distribution Committee have just endorsed the broad outlines which will govern the detailed scheme of central distribution of cloth which will hereafter be worked out and put into operation at the earliest possible moment. This central scheme has as its main objective the retention of the normal trade channels on the basis of their 1940-41-42 transactions. The quota holders in producing centres would group themselves into a small number of groups, each under a leader. This leader or his deputy or deputies duly constituted will be responsible to the Textile Commissioner for delivery of cloth ex quota holder's godown in the quantities and at the prices duly laid down only to the authorized wholesalers' groups in the provincial or district consuming centres.

"The cloth will leave the producing centre at not more than ex-mill plus 3 per cent. ex-godown, commission agent's remuneration, if any, not exceeding half per cent. being payable by the buyer. The scheme also contemplates that special steps shall be taken in regard to fine cloth because of the need to concentrate its retail distribution in urban areas with as few intermediaries as possible between the mills and the consumer and without greatly upsetting the existing channels of trade. A detailed scheme on the above lines, as soon as it is drafted and finalized, will be circulated to all members of the Board, and Provincial and State textile control authorities will be directed to ensure that the distribution arrangements within each of their territories are co-ordinated and are in exact accord with those in the central scheme. I have no doubt in my own mind that when this central scheme of distribution with the co-ordinated machinery in the various provincial and district centres is introduced black markets in cloth will by and large be things of the past."

Official Arrangements for Seizing Time-barred Stocks

Profiteering and black market trading in cloth and yarn were recently reported to have again assumed alarming proportions in Bombay and the textile control authorities have been obliged to ginger up measures against the anti-social elements.

The Provincial Textile Control Department of the Government of Bombay has taken severe action against several prominent cloth quota holders who have been called upon to show cause why their licences should not be cancelled. The control authorities are also investigating several cases of malpractices and dishonest stamping of cloth prices by manufacturers.

Meanwhile, the Province-wide Government organization for the distribution of cloth at controlled prices through approved shops has made good progress. Over 1,000 shops have already been opened in certain big centres and efforts are being made to meet the requirements of the consumers in the remotest parts. It is expected that the Government will be able to provide at least one cloth shop for a population of 6,000.

Arrangements for the stamping and price fixing of imported cloth and other fabrics which are arriving in Bombay on an increasing scale and the seizing of time-barred cloth have been completed by the Provincial Textile Control Department of the Government of Bombay. since Monday the 8th instant, inspectors of the department, assisted by the police, have launched a city-wide hunt for time-barred cloth—cloth that has remained undisposed of within the time limit fixed by the Textile Commissioner. In order to enable simultaneous action to be taken, the city has been divided into 19 zones, with a squad of inspectors and staff for each of them. It is proposed to concentrate first on the big wholesale and retail dealers and tailoring establishments, which also run a retail service. So far nearly 2,00,000 yards of time-barred cloth have been seized.

Every trader with whom time-barred cloth is found is liable to arrest and prosecution under the Defence of India Rules for breach of the Textile Commissioner's order. At the same time, time-barred stocks will be seized and kept in Government godowns until the disposal of the case. The goods will be confiscated, or otherwise dealt with, according to the court's orders.

Import Price Committee

An Import Price Committee has been appointed to assist the Provincial Textile Controller in the fixing of prices of imported cloth. The Provincial Textile Controller, Bombay, is the Chairman, and the members are Messrs. A. Sotiriadi, W. R. O'Vrien, Chimanlal B. Parikh, Gordhandas G. Morarji, and Purshotam Mulji Kapadia. The Textile Commissioner has already announced the general principles of price fixing, but discretion has been given to the Provincial Controller to make departures wherever necessary. Under this plan, every piece of cloth landed in the port will have to be notified to the Provincial Textile Controller, who will issue a certificate after the cloth has been price-stamped and TCB marked. The stamps will indicate the port and date of landing, the importer's price and the dealer's price.

The Government of Bombay has appointed the Provincial Textile Controller, Bombay, as " Controller " for Bombay Province in respect of the Government of India's notification fixing* the maximum wholesale and retail prices of cloth and yarn imported from outside India.

A scheme for the distribution of yarn to hand and power-loom weavers, whose trade has been almost brought to a standstill as a result of yarn shortage, has been prepared and put into operation at Ahmedabad by the Provincial Textile Controller, Mr. J. K. Thakore. Under this scheme, yarn quota holders are required to place at the disposal of the Provincial Textile Controller all their stocks and they will be free to sell directly only such of the stocks as are not required by the Controller.

The scheme was explained the 6th instant to members of the Yarn Dealers' Association and the Yarn Exchange in Bombay by Mr. Thakore. While pointing out certain drawbacks in the scheme, the majority of those present expressed their readiness to co-operate with the Government plan to ensure supply of the available stock of yarn to power and handloom weavers who were facing ruin.

The Textile Control Department has completed a census of the hand and power-looms in Bhiwandi, Malegaon and Surat and ascertained the extent of their yarn requirements. A similar census was undertaken in Bombay, and the Provincial Government have since decided to take over the entire distribution of cotton yarn in the province.

Textile Processors' Association (India) Bombay

" In order to mitigate the difficulties felt by the textile processing industry in Bombay due to the recent enactment of the amendment to the Textile Control Orders, an arrangement has been arrived at between the Textile Commissioner, Bombay, and the Textile Processors' Association (India) that an agreed quota for processing all cloth would be granted to the Association for redistributing the same among its members on the basis of their previous operation.

" This system, it is trusted, will work beneficial to all interests concerned and would also help in the elimination of the black marketing of cloth. The Textile Processors' Association (India) have thus undertaken a very great responsibility and they are exercising all effective methods of controls for the elimination of black market. They would not allow any printing of *kutcha* colours and half bleaching of cloth by their members."

CONTROL NOTES AND NEWS

Exemption for Speciality Cloths

The Textile Commissioner to the Government of India has decided to exempt certain speciality cloth from the operation of his notification of 16th December 1944, requiring quota holders in the city and suburbs of Bombay not to sell or dispose of their stocks except under certain specified conditions. Such speciality cloth includes cloth texmarked and marked " for export," tapestry, filter cloth, book-binding cloth, tarpaulins, emery cloth, waterproof cloth, double texture proof cloth, single layer synthetic proof cloth and imitation leather cloth.

Fine Cloth Sales : Returns to be Submitted

The Textile Commissioner to the Government of India has, by a notification published in the *Gazette of India* under powers conferred on him by Clause 18(A) of the Cotton Cloth and Yarn (Control) Order, 1943, directed all the manufacturers in the country to submit to him on or before the 15th day of every month commencing from December 1944, a return of sales of fine cloth made by him in the preceding month, giving the details of the name of the buyer with his address and the total quantity of fine cloth in terms of bales delivered to him against the quota during the preceding month. The notification explains that " fine cloth " means cloth in which the count of the warp yarn is 36s and finer whether it is single or folded. Failure to submit these returns is an offence under the Defence of India Rules.

Correct Marking of Prices

Under the Cotton Cloth and Yarn (Control) Order, 1943, the manufacturers are required to mark on the cloth and yarn produced by them the maximum ex-mill and retail prices prescribed by the Textile Commissioner. The duty to mark the prices correctly initially rests on the manufacturers, and the Textile Commissioner desires to impress upon them the desirability of providing scrutiny of the markings at the time of packing so as to prevent any incorrectly marked cloth or yarn being packed. The dealers should also ascertain, by reference to the notification on the subject, that the markings made on the cloth which they have in their possession, and which they may hereafter acquire, are correct. In case of doubt as to the correctness of the markings on any such cloth and yarn, they should at once report the matter to the Provincial Cloth Control Officer for guidance and should not dispose of the cloth or yarn unless authorized by him so to do. This is necessary in the dealers' own interest because a dealer commits an offence punishable under the Defence of India Rules if he sells cloth or yarn at a price in excess of that prescribed by the Order despite the fact that the price may be in accordance with the markings.

Disposal of Mill-packed Bales

The Textile Commissioner to the Government of India desires to inform all quota holders in the city and suburbs of Bombay that with respect to the 20 per cent. of the stocks that they are permitted to sell in unbroken mill-packed bales to dealers in Bombay, they must do so only after obtaining from the purchaser a declaration in writing that he is a Bombay Government licensed cloth dealer and he is neither a retailer nor a quota holder. Those quota holders whose total quota per month from all mills does not exceed 8 bales, are permitted to dispose of all such bales to any Bombay Government licensed dealer other than a quota holder or a retailer.

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* See the *Indian Textile Journal*, November 1944, p. 119.

Export Cess Becomes Leviable Irrespective of Date of Contract

Under clause 4 of the Cotton Textiles Fund Ordinance cotton cloth and yarn contracted for export prior to the date of the Ordinance is exempt from the levy of the cess of 3 per cent. The Government of India have now decided that with effect from 1st February 1945, all cotton cloth and yarn exported out of India shall be liable to the cess irrespective of the date of the contract. They have also decided that in cases where no maximum ex-factory price has been fixed for the cloth or yarn meant for export, the 3 per cent. cess will be levied on the basis of the value of the cloth or yarn as declared in the shipping bill.

Cloth and Yarn (Export Control) Order Amended

The Cloth and Yarn (Export Control) Order, 1944 has been amended by a notification in the *Gazette of India* published on the 4th November 1944 providing that no person other than a manufacturer shall sell, offer to sell or store for sale to an exporter cloth or yarn meant for export except under and in accordance with a licence which will be issued by the Textile Commissioner on application in the prescribed form. This form has been published by the Export Trade Controller in his notice War No. 647, dated 3rd August 1944. A fee of Rs. 1,000 will be charged for each licence. It will be issued for a period of three months only in the first instance and may, at the discretion of the Textile Commissioner, be renewed and it is also liable to cancellation by the Textile Commissioner. It has been further laid down that a dealer holding such licence should not charge a price which exceeds the "standard price" by more than 10 per cent.

"Standard price" in regard to sale by manufacturer to exporter of cloth meant for export is the ruling ceiling ex-mill price notified by the Textile Commissioner under the Cotton Cloth and Yarn (Control) Order, 1943 applicable for the first month of the export quarter mentioned in the quota licence granted to the exporter by the Export Trade Controller.

In relation to sales by manufacturers to export wholesale licensees, "standard price" means the ex-factory price ruling on the date of issue of the export wholesale licence.

Manufacturers are entitled to charge "standard price" plus 7 per cent. thereof in either case. The same notification defines export price to mean the f.o.b. price so far as export by sea is concerned and the f.o.r. price in case of exports by land.

The notification also provides that no person shall export cloth or yarn intended for domestic consumption which has been texmarked and price-marked.

By another notification published in the *Gazette of India* dated 25th November 1944, the Central Government have further amended the Cloth and Yarn (Export Control) Order, 1944, introducing a new clause which lays down that no person shall, save in accordance with the general or special permission of the Textile Commissioner, sell or agree to sell for export cloth or yarn of any class or specification, other than cloth manufactured on handloom, the standard price whereof has not been specified under clause 10 of the Cotton Cloth and Yarn (Control) Order, 1943. By this notification the word "export" is now defined to mean taking out of British India by land, sea or air to any place outside India or to any tribal area or Indian State beyond the Western and Northern boundaries of the North-West Frontier Province.

On 8th November 1944, a Press Note was issued directing the attention of all persons possessing hosiery machines to the notification in the *Gazette of India* of 21st October, wherein the Government of India called upon all such persons to furnish details of the various types of hosiery knitting machines in their possession and of the types of hosiery needles required for these machines.

The information received by the Textile Commissioner up to the end of November is believed to be far from complete and it has been decided to keep the record open until 15th January 1945.

All persons possessing hosiery knitting machines should note that any arrangement made for the procurement and distribution of hosiery needles will be directly related to the records compiled from the information received and any person possessing hosiery machines who has not submitted the required details will not receive any assistance to obtain hosiery needles, hosiery machine parts, etc.

Marine War Risks

The Government of India have decided to afford free marine war risks cover on yarn transported by sea between Madras and/or Tuticorin and Calcutta from 16th December 1944, to 31st January 1945. Free marine war risks will be given provided the consignor or consignee has already insured the consignment against marine risks with an insurance company or underwriter and an application for free marine war risks accompanied by a certified copy of the marine risk policy is made to the Textile Commissioner, Bombay, prior to shipment.

* * *

The Government of India have decided to extend up to 31st January 1945, the existing arrangements whereby Government carries marine war risks on cotton piecegoods and yarn transported by sea between Bombay and Calcutta under the existing terms and conditions.

* * *

An amendment to the Textile Industry (Miscellaneous Articles) Control Order, 1943, published in the *Gazette of India*, dated 2nd December 1944, includes "the ordinary loom pickers of all types" among the articles controlled by that Order.

By a notification issued by the Textile Commissioner, published in the *Gazette* of the same date, it is provided that no person should sell ordinary loom pickers of all types required by the textile industry, (other than jute and hemp) at a price exceeding Rs. 210 per gross f.o.r. port of entry or town of manufacture in India with effect from 1st December 1944.

* * *

In order to facilitate distribution of cloth and yarn, the Textile Commissioner authorises mills to decline to entertain after 15th January 1945, any claim for eligibility to quota, made by any person. This does not debar delivery of quotas to persons already recognised as quota-holders.

DISTRIBUTION OF MILL-MADE CLOTH

Dealers' Suggestions to Government

To elicit the views of cloth dealers in the Province of Madras on the zonal scheme of distribution of mill-made cloth, Mr. S. Venkateswaran, Provincial Textile Commissioner, convened a conference of the representatives of the trade last month.

Mr. Venkateswaran, at the outset, explained to the conference, in detail, the scheme framed by the Textile Commissioner of India for the distribution of cloth by the division of India into surplus and deficit zones and said that the South Zone comprising the Madras Province, the South Indian States, Hyderabad, Coorg and the C. and M. Station, Bangalore, was a deficit area. Pointing out that under the new scheme the people would get only ten yards per head per annum (including handloom and local mill cloth) as against over 13 yards consumed in the pre-war period and that the Madras Government had been pressing strongly for increased quota, he said that, in addition to the internal production of mill-made and handloom cloth in the South Deficit Zone, the zone was now allowed to import 8,950 bales only a month, out of which the Madras Province's share was likely to be only 4,929 bales. The 8,950 bales would comprise 2,250 bales received from the Bombay mills, 2,250 bales from the Ahmedabad mills and the remaining 4,450 bales from other surplus areas like Sholapur, Baroda and Indore. The imports would include only about six per cent. of 'fine' cloth. Mr. Venkateswaran referred to the classification of dealers into A (sole importers), B (sub-wholesalers) and C (retailers) classes and mentioned that, out of the importers for the South Zone, Madras Province would have six. He invited those present at the conference to express their views on the classification of dealers, the fixation of the profit margins for each class (out of the 20 per cent. margin between the ex-mill and retail ceiling prices) and on the extent to which the different classes of dealers should be linked up to secure a planned distribution of the mill-cloth made available.

Recommendations to Textile Commissioner

The following recommendations were made by the Conference for the consideration of the Provincial Textile Commissioner : Only one representative, with headquarters at Bombay, should be appointed to deal with all matters concerned with the procurement of goods from the surplus areas. Out of the commission allowed to him, he should meet all his expenses and remunerate all his staff including the Assistants appointed by him at Sholapur and Ahmedabad with the approval of the Provincial Textile Commissioner. The present 10 per cent. margin of profit for retail dealers should be maintained. For any goods on which 2½ to 4 per cent. out of the total margin allowed for the trade, had to be paid in Bombay, Ahmedabad, etc., there was no place for 'B' class dealers in this Province. In respect of goods produced by mills in the South Deficit Zone, there must be 'B' class dealers (sub-wholesalers). In respect of all mill-quota goods coming into the Province, at ex-mill rates, the majority view was, there should be 'B' class dealers. In respect of such mill-quota goods received in the Province, an 'A' class dealer should sell to 'B' class dealers at a price not exceeding 6¼ per cent. over the ex-mill price, the freight charges from the mill to his place of business being borne by him. The 'B' class dealers should sell to the 'C' class dealers, that is, the retailers, at a price not exceeding the ex-mill price, plus ten per cent.

The Conference resolved that as regards the production of the local mills, i.e., the mills in the South Deficit Zone, the margins for 'A' and 'B' class dealers should be as indicated below : 'A' class dealers should not sell to 'B' class dealers at a price exceeding the ex-mill price plus 5 per cent. 'B' class dealers may have a margin of 5 per cent. and sell to 'C' class dealers at a price not exceeding the ex-mill price plus ten per cent. It was also decided that for proper distribution of cloth under the scheme, district quotas should be fixed not only for fine goods but also for other mill goods, provided a reasonable scheme was found feasible. The consensus of opinion at the conference was that, even if a district quota scheme was introduced only 'A' and 'B' class dealers should be linked up and that as far as possible the linking up of retailers to wholesalers of any category should be avoided. If unavoidable, such linking-up should be confined to retailers in a district with wholesalers who were not in the same district and who had to supply to the district to make up the district quota in all respects.

Madras Order

The transport of cloth from any place within the limits of Madras Province to any other place outside those limits is banned by the Madras Government.

Fighting Black-Marketing

With a view to fighting the flourishing black-market in cotton textiles, the C. P. and Berar Chamber of Commerce is considering, at the suggestion of the Provincial Government, a scheme to import cloth from the Bombay production centre.

The scheme envisages the formation of a syndicate of ten merchants under the ægis of the Chamber, who will deposit with the Government Rs. 50,000 each as security and appoint agents in Bombay to purchase and despatch cloth. The syndicate will appoint retailers from the *bona fide* merchants of 1942, the basic period, and will have to take a percentage of the standard cloth lying unsaleable with the Government.

It is proposed to extend the scheme to the distribution of the production of local mills also.

Weaving Shed Efficiency

BY M. M. TIWARI, L.T.M.

IN a mill the eyes of the management are always on weaving shed efficiency. They want the maximum output, but we must see to the other side of the problem. There are many factors which govern the efficiency of a weaving shed. They can be discussed as follows. A loom requires a man to run it. He should be a good weaver who can give us the best possible production. This man does not come from any institute or college. He is to be trained in the particular mill only where he is required. There are so many ways of training also which makes a good weaver. This training is thoroughly in the hands of the management who can turn out the best possible weaver if they like by introducing many sorts of labour training schemes. A labourer or a weaver should have good health, be a bit educated and possess knowledge to understand things.

The next thing a loom requires is a good beam to run. The beams which come from the sizing department are found with certain defects which are mainly responsible for low production. The beams are generally soft sized or brittle sized, in both the cases there are excessive warp breakages which stop the loom every now and then causing less production and less efficiency. When there is an entanglement of warp at the back of the sizing machine the back sizer generally cuts so many ends and those ends are found missing in the weaver's beam on the loom producing less and damaged cloth. So many defects are found in the warper's beam from the warping department. The warper so many times runs the machine without putting the full number of drop pins, thereby so many ends are found to be missing because the machine does not stop when the ends break. So many times numbers of cross ends are found in a beam due to the negligence of the warper.

Large knots found in a weaver's beam are solely from the winding department. These knots, when they pass through the heald eye, entangle and break, causing further entanglement of warp and unnecessary stoppage of loom.

Uneven and weak yarn is the cause, which comes from the spinning department.

The defects which come from winding, warping and sizing can be rectified only by strict supervision. There is no other remedy because this is nothing but the carelessness of the operatives.

The management should always try to use durable and the best possible loom sundries because they are solely responsible for good working. Suppose they use an inferior quality of shuttle, picks, buffer, picking band, checkstrap, and picking stick, then every time something or other will break, causing the loom to stop and allow the weaver to go to the stores or to the jobber for its replacement.

Sometimes the weft from the spinning department comes very bad, which breaks every now and then and stops the loom.

A good loom is also responsible for good efficiency. A loom when it is new gives the maximum efficiency and service. A certain life is possessed by every machinery; if care is not taken properly then it will always cause some trouble and affect the efficiency of the shed. So after an interval of certain years it must be overhauled. In working time it must be always cleaned and oiled properly.

The most necessary thing required is strict supervision. The Indian labourer is very fond of smoking *bidis* and chatting. No looms should be stopped unnecessarily for want of weavers. If a weaver goes out, his neighbour must run it and keep it running until he returns.

If the above things are maintained then there is no difficulty in getting good efficiency. They are the most common things but they are not attended to properly.

OUR PERSONAL COLUMN

New Year Honours.—The following, among others, have been awarded titles in the New Year Honours List :—

KNIGHTHOOD

The Hon'ble Mr. Justice Harsidhbhai Vajubhai Divatia, Puisne Judge of the High Court of Judicature at Bombay (President of Industrial Court, Bombay).

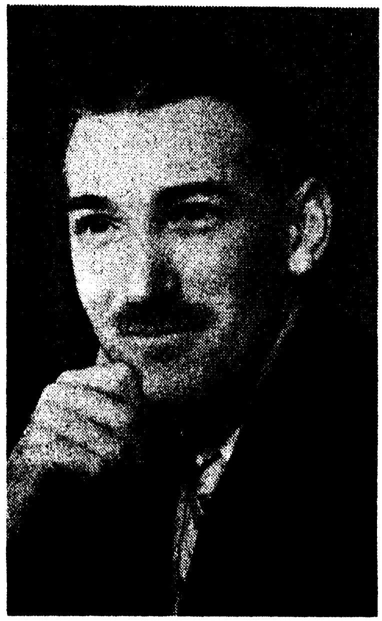
Mr. Robert William Targett, Director-General, Supply and Disposals, Department of Supply, Government of India.

Mr. Bomanji Jamshedji Wadia, Barrister-at-Law, Vice-Chancellor, University of Bombay.

Dewan Bahadur A. Lakshmanaswami Mudaliyar, Vice-Chancellor, University of Madras.

Mr. Jehangir Jivaji Ghandy, Agent, Messrs. Tata Iron and Steel Co., Ltd., Calcutta.

Sir James Doak, Kt., C.A., on whom a Knighthood has been conferred, is a Partner of Messrs. A. & F. Harvey, Managing Director of the Madura Mills Co., Ltd., Madura, and Chairman of the Board of Directors of the Pandyan Insurance Co., Ltd., and the Punalur Paper Mills Ltd. Born in 1904, he joined the firm of Messrs. A. & F. Harvey in 1928.



A well-known and prominent figure in the sphere of industry and commerce, Sir James has served on the Indian Central Cotton Committee and the Yarn Sub-Committee of the Cotton Textiles Panel and latterly on the Textile Control Board and its Committees. As Chairman of the Handloom Committee of the Textile Control Board, he has taken much interest in the setting up of the proposed All-India Handloom Board.

Progressive movements calculated to further the interests of public well-being in South India have found in Sir James a ready patron. As an employer of the largest private labour force in South India, Sir James is keenly interested in their welfare and housing conditions and has done a lot to improve them.

C.I.E.

Mr. D. C. Fairbairn, Secretary, Bengal Chamber of Commerce, Calcutta.

O.B.E.

Mr. P. C. Chaudhuri, I.C.S., Additional Chief Controller of Imports, New Delhi.

Mr. D. Mahta, Secretary, Indian Central Cotton Committee, Bombay.

M.B.E.

Mr. N. O'Hagan O'Neill, I.C.S., Under Secretary to Government of India, Department of Industries and Civil Supplies.

Mr. Mani H. Mehta, Joint Secretary, Bombay War Gifts Fund, and Partner of H. M. Mehta & Co., Bombay.

DEWAN BAHADUR

Mr. Krishna Rama Pai, Controller of Patents and Designs, Government of India, Calcutta.

RAO BAHADUR

Mr. K. M. S. Lakshmanier, Director, Madura Mills Co., Ltd., and President, Madura-Ramnad Chamber of Commerce, Madura.

Mr. R. Guruswamy Naidu, Managing Agent, Palani Andavar Mills Ltd., Udamalpet, Coimbatore District.

Mr. Deva Rao Shivram, Bangalore.

Sir Robert Menzies, Kt., O.B.E., V.D., C.A., Chairman and Managing Director, the British India Corporation Ltd., has been elected President of the Upper India Chamber of Commerce, Cawnpore, for 1945.

Mr. C. P. Bramble, of Messrs. Drennan & Co., has been elected President of the Bombay Chamber of Commerce for the year 1945-46.

Mr. Bramble has been connected with the Chamber for a number of years and was its President in 1940-41. He was recently elected President for the current year owing to the ill-health of Mr. A. L. Hutson. Mr. Bramble is a sitting member of the Bombay Legislative Assembly and is connected with a number of public bodies, including the European Association, Bombay Branch, of which he is chairman. He is also the Chairman of the National Service Advisory Committee, Bombay Area, and an Honorary Presidency Magistrate.

Mr. John Slater, Director of Messrs. W. H. Brady & Co., Ltd., has retired and left for England during the month, after a service with his firm in India of about 23 years. Before he came to this country, Mr. Slater was Assistant Manager at a mill in England and was also a lecturer in cotton weaving at the Burnley Technical College.

He joined the firm of W. H. Brady & Co., Ltd., Bombay, in 1921 as an Assistant in their textile machinery department, and was appointed a Director in 1932. Mr. Slater has travelled extensively in this country and is well known and popular with everyone in the cotton industry and he has been responsible to a considerable degree for the extension of the use of English textile machinery and of the Leesona system of high speed winding and warping in this country.

During the past two and a half years he has been a member of the Textile Control Board of the Government of India at Bombay.

We understand that Mr. Slater's retirement was due to reasons of health and we hope that with modern treatment and rest in his native country he will eventually be able to renew his connection with the textile industry of India in the development and progress of which he has been so closely interested.

Mr. Yusuf Sait, President of the Southern Indian Chamber of Commerce, has succeeded Dewan Bahadur Gopathi Narayanaswami Chettiar as Sheriff of Madras.

Mr. Dharma Vira, I. C. S., has been appointed as Deputy Secretary to the Government of India, Department of Industries and Civil Supplies.

Mr. R. H. Parker, Additional Controller-General of Civil Supplies, is to officiate as Controller-General of Civil Supplies and ex-officio Joint Secretary to the Government of India.

The services of **Mr. S. N. Mehta,** I.C.S., Deputy Controller-General of Civil Supplies, Bombay, have been placed at the disposal of the Government of India in the Commerce Department.

Mr. Geoffrey W. Tyson, C.I.E., has been elected a member of the Indian Legislative Assembly from the Bengal (European) constituency in place of Mr. C. C. Miller, resigned.

Mr. B. A. Kureshi will officiate in place of Mr. M. H. Mahmood, Director of Industries, the Punjab, who has been appointed Deputy Industrial Adviser to the Government of India.

Mr. R. A. Royston, Manager of the Elgin Mills (belonging to Messrs. Begg Sutherland & Co., Cawnpore) has been appointed Textile Commissioner for the U.P.

Khan Bahadur Iqbal Ahmed Khan, (at present Additional Commissioner, Agra Division) has been appointed Deputy Controller, Civil Supplies, U.P. and Bihar. The creation of the post, it is understood, is in pursuance of the Government of India's desire to effect a smooth working in the Civil Supplies Department and is intended to meet the increasing amount of work.

Lala Kailashpatji Singhania, Senior Director of J. K. Industries, has been unanimously elected Mayor of Cawnpore. *He is the youngest incumbent of the* post, being only 37 years of age.

Rao Saheb N. M. Sundram, Deputy Director of Industries and Supply, Assam, has now been deputed to Bombay as Deputy Provincial Textile Commissioner, Assam, for procurement of cloth and yarn for that province with effect from 1st January 1945. He has his office at Hararwala Building, Ballard Estate, Bombay.

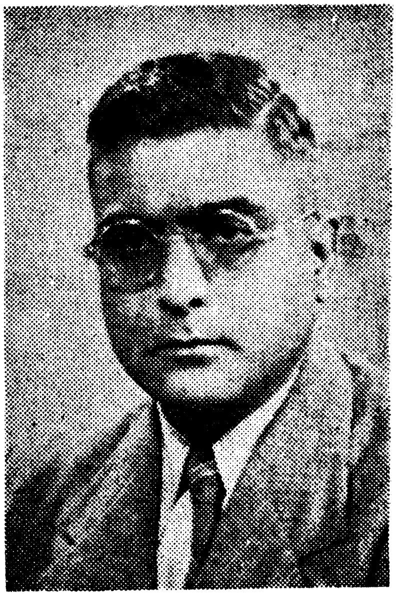
At the recent Annual Meeting of the members of the American Society for Testing Materials held at New York, U.S.A. the following office-bearers were unanimously elected for the year 1944-45: —Messrs. P. H. Bates, President; Arthur W. Carpenter, Vice-President, and the following as members of the Executive Committee (1944-46): Messrs. W. C. Hanna, L. B. Jones, J. T. MacKenzie, J. G. Morrow, and Sam Tour.

Sir Chunilal B. Mehta, leader of the Indian Delegation to the International Business Conference held at New York last month, has returned to Bombay.

In an interview he said that, although India feels that the lowering of the international trade barriers was necessary after the war, certain safeguards would have to be introduced for the protection of the country's existing industries against the influx of foreign goods.

Sir Chunilal added that although India's small industries had grown since the war, the country's heavy industries were still backward and must be protected to prevent a complete collapse of industrial development. "This should not be taken to mean that India is adopting a policy of economic nationalization," he emphasized. "India has raw materials and plenty of labour and also home markets. It is her idea to raise the standard of living and the purchasing power of the country."

Mr. J. B. Greaves, C.B.E., M.L.A., J.P., Honorary Chief Controller of Raw Materials and Stores, Government of India, Bombay, the newly appointed Sheriff of Bombay, was presented with an address referring to his selfless services at a social function in his honour, organized by the Indian staff of Messrs. Greaves Cotton & Co., Ltd., and its allied companies, at Forbes Street, Bombay. Mr. Bomanji H. Bharucha presided. Mr. *Dadabhoy M. Bharucha, Mr. D. A.* Patkar, Mr. Anantrao, Mr. F. Fernandez and Mr. D. M. Gupte paid glowing tributes to Mr. Greaves. Mr. Greaves made a suitable reply.



Mr. R. D. Char, the proprietor of the Industrial and Agricultural Engineering Company, and partner of Associated Textile Engineers, Bombay, has left for the United States of America to study the latest developments and methods of the manufacture of lead-acid batteries with a view to negotiating and selecting personally the plant for modernizing and expanding their present Battery Factory—The Standard Batteries, Ltd., Bombay, of which he is Chairman of the Board of Directors.

Mr. Char has been connected with the supply and erection of special textile machinery and ventilating and humidification plants for the last 26 years and will be taking this opportunity to get first-hand information regarding developments in the cotton spinning, weaving and finishing processes in U.S.A. with a view to interesting the textile mills in this country in such American equipment and devices as could be advantageously introduced in this country, subject to trade control and Government regulations.

His personal interest and experience in electrical, textile and chemical industries and trade, coupled with his engineering knowledge and qualifications, should stand him in good stead during his visit to the U.S.A. and fit in with the post-war industrial development of this country.

Mr. Char is expected to stay in America for about four to five months.

The Government of Bombay have appointed **Mr. S. S. Rajagopalan,** as Special Officer in the Handloom Section of the Industries Department.

The main duties of the Special Officer will be to build up and deal with the export trade in handloom fabrics and art crafts; to have suitable fabrics to meet overseas orders woven through the agency of the industrial weavers' co-operative associations under the Department of Industries and arrange to have them processed in Bombay and shipped abroad ; to deal with all correspondence with the Industrial Weavers' Co-operative Associations and overseas customers; to scrutinize the periodical sales reports of the district sales depots with a view to taking proper steps for the efficient control of the depots and their development on sound commercial lines ; and to reorganize the Bombay Sales Depot.

Mill Staff News

Mr. James H. Dawson, F.T.I., has been appointed as Resident Consulting Adviser of the Lakshmiratan Cotton Mills Ltd., Cawnpore.

Mr. N. L. Desai, who was the Junior Weaving Master in the Jam Mills, Sholapur, has now joined the Rajratna Mills, Petlad, as Weaving Master.

Mr. Ralph P. Richardson has been appointed Mill Manager of the New Victoria Mills, Cawnpore, since 10th December 1944.

Mr. E. J. Tarapore, B.Sc. Tech. (Manc.), L.T.M., A.M.C.T., who has been working as acting Manager since May last, has been confirmed as Manager of the Osmanshahi Mills from November 1944.

Mr. S. G. Chowdhury, B.Sc., formerly Assistant Secretary to the Birla Cotton Spinning and Weaving Mills, Ltd., Delhi, has now joined the Moon Mills, Ltd., Bombay, as Factory Manager. He belongs to a respectable family of the Jaipur State and is one of the few promising Marwari graduates in Chemical Engineering and Industrial Chemistry, having thorough and practical experience of every branch of cotton mill management.

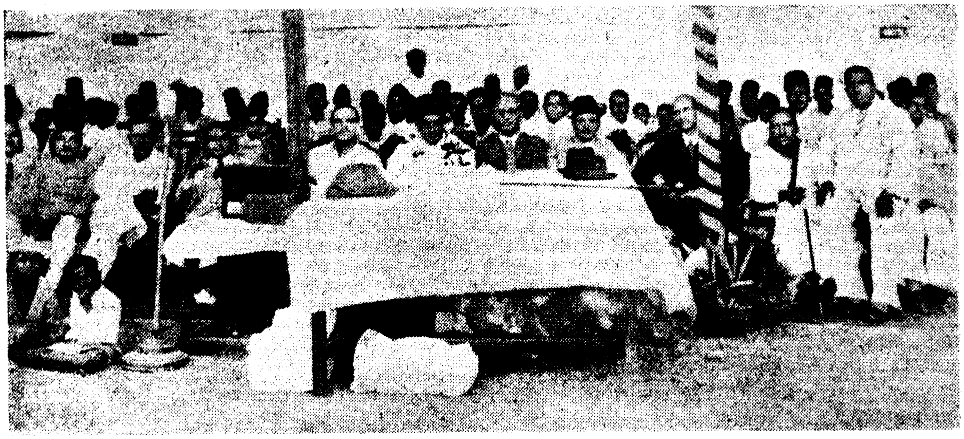
Obituary

Dr. Henry Dreyfus, Chairman and Managing Director of the £15,000,000 British Celanese Limited, died at his London home on 31st December, 1944, aged 62. A fatal heart attack occurred two days after he had issued a reply to criticisms of the company made in the House of Commons.

Mr. Kenneth Gordon.—We regret to record the death of Mr. Kenneth Gordon, aged 64, at Stafford, England, on Wednesday, 8th November 1944. Mr. Gordon was for many years on the staff of Siemens Brothers Dynamo Works Ltd., and subsequently of The English Electric Co., Ltd. He was first engaged as an assistant at the Sheffield Branch of S.B.D.W. Ltd., and in 1909 was posted to their Bombay Branch and later transferred to Calcutta. Early in 1915 Mr. Gordon returned to England and joined H. M. Forces. After his war service he joined the staff of The English Electric Company, Ltd., and in 1920 returned to India, being appointed Manager of their Madras Branch, which position he held until 1936 when he returned to England. He remained an active member of the Export Department, Stafford, until retiring from the service of The English Electric Company Ltd., on 30th September 1940.

The Osmanshahi Mills Ltd., Nanded

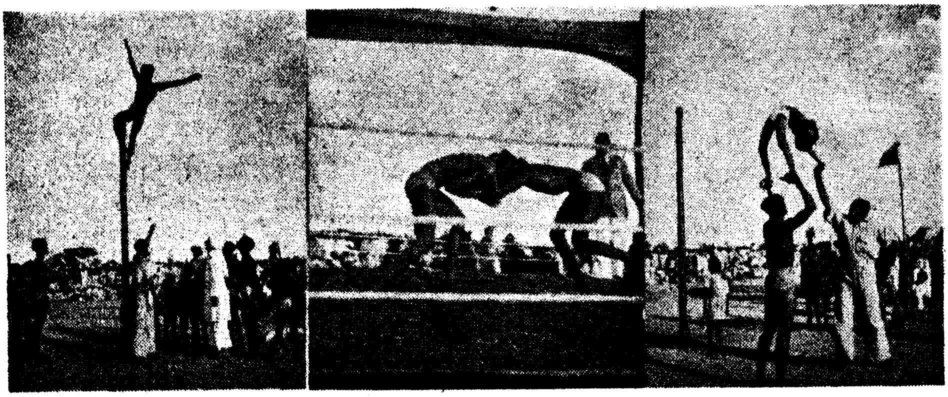
Wrestling Tournament



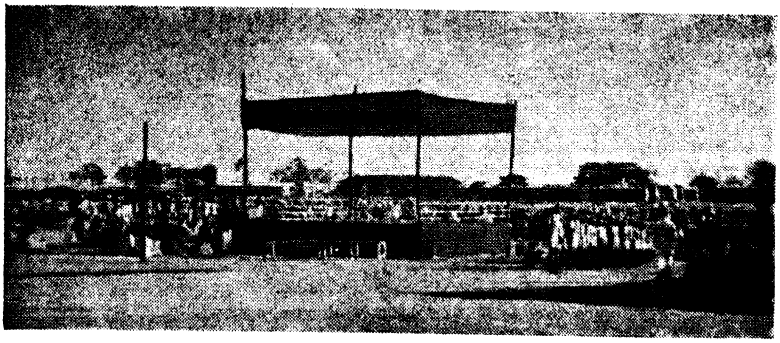
View of the gathering watching the Tournament

UNDER the auspices of the Workers' Welfare Committee of the Osmanshahi Mills, Ltd., Nanded, a wrestling tournament was conducted for the workers of the mills, the finals of which took place on Saturday the 16th December 1944. Nawab Syed Shahbuddin Saheb, District Collector, Nanded, presided on the occasion. Amongst the distinguished visitors who witnessed the contest were the local officials and the constituents of the mills numbering about 150 persons. The mill area presented a festive appearance and the enthusiasm shown by the mill employees was great, about 3,000 people being present on the grounds. Elaborate arrangements were made by the mill authorities for the occasion—a decorated special pandal was erected for the visitors, as well as a specially decorated arena.

Out of 81 people who participated, 50 qualified for the finals. There were 25 bouts and the contestants displayed extraordinary skill in the game, which was very much appreciated by those present. The mill school boys gave a demonstration of drill and *malkham* which enhanced the impressiveness of the day's celebrations. The District Collector distributed the prizes—which were given in the form of cash and cloth—to the winners and other participants.



Views of sports in progress



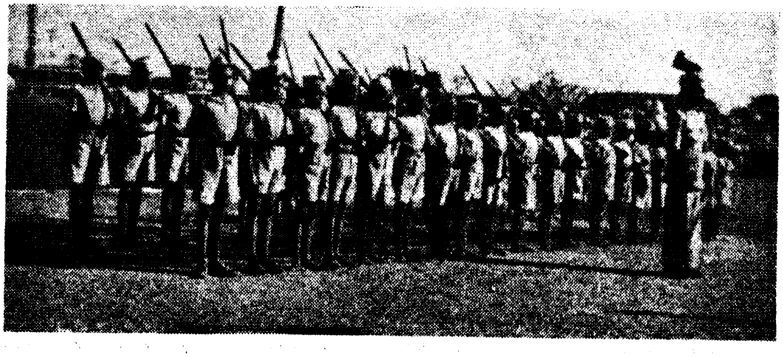
Specially decorated wrestling ring

place of conflict and misunderstanding." He thanked all those present for having graced the occasion by their presence, and also expressed his personal thanks to Mr. Shaikh, the Sports Secretary, for the enthusiasm with which he worked to make the day a success. He also thanked the other officers and staff of the mills and such other silent workers down to a coolie who had worked unflinchingly for the success of the function.

Mr. Tarapore, Chairman of the Workers' Welfare Committee and Manager of the mills, addressing the guests, outlined the activities of the Workers' Welfare Committee since its inception less than two years ago, and said " the reason why the management have taken upon themselves to foster labour welfare is that we wish to treat our workers as human beings and we desire to thrive without taking advantage of them." He continued: " The best of welfare schemes are apt to fail if the workers are not able to appreciate the same on account of their utter ignorance and illiteracy, which is rampant in this country. The Welfare Committee has, therefore, now decided to tackle the problem of adult education—difficult as it is—and arrangements are now afoot to start adult education night classes for workers in the mill premises and also to conduct open elementary group lectures on subjects such as health, hygiene, temperance, current history and geography—lectures in general of topical interest and educative value. Industrial relationship has made great headway in our generation and the happy feeling that exists today is a only modest instalment of what it is possible to secure with proper and reasonable adjustments, provided co-operation, conciliation and confidence can be established in the

The Nawab Saheb addressed the gathering first in English and then in Urdu; the gist of his speech was as follows:—

" I feel great pleasure to be amongst you on this occasion when you are celebrating 'Wrestling Day.' The management are to be congratulated on taking keen interest in the physical development of their workers. Strength and strong physique are essential for maintaining efficiency and to get increased wages. The Government also are endeavouring to provide for your comforts and convenience because the State's progress and development depend on your happiness and welfare. Another thing which I should like to emphasize is 'discipline.' Discipline is the key to success. You should, therefore, obey your officers implicitly because they have in their hearts nothing but your welfare and interest."



Drill demonstration by mill school boys

Dawn Mills Sports Club, Bombay

THE Dawn Mills, Lower Parel, Bombay, has done much to interest and encourage its workers in the line of sport. The mill has not been slow to realize that games and physical exercises are conducive to good health, and good health makes for greater efficiency and contentment.

The sports club, which was started just about a year ago, has progressed very rapidly. This has been due chiefly to the encouragement it has received from the Manager of the mill, Mr. H. Hargreaves, who is a keen sportsman, and also to the co-operation of many of its enthusiastic members. All facilities have been given to the workers to play indoor and outdoor games after working hours and during the recess periods.

During the monsoons this year a carrom tournament was held in singles and doubles. Mr. Hargreaves very kindly donated a challenge shield known as "The Hargreaves Challenge Shield" on which was inscribed the names of the winners of the doubles tournament. The sports club itself donated a challenge cup for the singles tournament. Individual prizes were also awarded to the winners and runners-up of the singles and doubles tournament.

After the monsoon, an inter-departmental tug-of-war tournament was held. This proved very interesting, and created much excitement amongst the workers of each department. The carding and doubling departments have managed to reach the final and very soon they will decide as to which is the stronger. The Spinning Master, Mr. C. Fernandes, has generously donated a challenge cup on which will be inscribed the name of the winning department. Individual prizes will also be awarded to the winning team.

The wrestling pit is ready, and the workers are now busy practising for the wrestling tournament, which is to take place in the first week of January next year. Other athletic events, viz., 100 yards flat race, half-mile race, long jump, high jump and putting the shot, will also be held about the same time. The workers are quite enthusiastic about these events, and are very busy practising for them. The sports club is awarding prizes for the winners of the first three places in each event.

At present the mill is conducting a volley ball tournament open to all clubs in the city and suburbs. The Managing Agents of the mill, Messrs. Sassoon J. David & Co., Ltd., have presented a challenge cup known as "The Sir Percival David Challenge Cup" for this tournament. The name of the winning team will be inscribed on this cup, which incidentally may be won outright by any club winning it for three years in succession. The mill team took part in an open volley ball tournament conducted by the Y.M.C.A. (Gilder Tank Branch) about the middle of June when they were runners-up. They gave their opponents a hard fight in the finals and were unfortunate not to win. In addition to the games mentioned, badminton, tennis, and chess are also played in the mill.

The club has also started a library, which contains the latest technical books, novels, magazines, etc., in different languages. These books may be read in the club's reading room or taken home as desired by its members. Thus the sports club not only helps its members to improve their health, but also endeavours to increase their knowledge and widen their outlook on life.

Social Gathering of Thackersey Group of Mills' Staff

A SOCIAL gathering, said to be the first of its kind in Bombay, was held on Monday the 1st January 1945 at the Sunderbai Hall when more than 1,000 members of the staff of the Thackersey group of mills in Bombay and their families were present.

On this occasion a popular Marathi drama, Kulavadhu, by Natya Niketan was staged. During the interval a tea-party was given. The Managing Agents who were present throughout the function with their families are to be congratulated on organizing such a pleasant function which helps to bring about closer relations between employers and the members of the staff and also among the staff themselves. The whole function was a complete success and this example may be followed with advantage by other mills.

Two views of the gathering. Seth Krishnaraj D. Thackersey with other Directors and their families is seen in the first group on left.

Commercial and Technical Organizations

Associated Chambers of Commerce, Calcutta

H. E. The Viceroy's Address

THE annual meeting of the Associated Chambers of Commerce was held in Calcutta on Thursday the 14th December 1944 under the presidentship of Mr. K. W. Mealing. His Excellency Lord Wavell, Viceroy of India, was present on the occasion. Post-war problems of trade, commerce and industry, the country's food policy, war risk insurance, and income-tax figured on the agenda. In the course of his presidential address Mr. Mealing referred to post-war reconstruction and said: " It must, I fear, be anticipated that some interests will desire to shape industrial planning with greater regard for their own benefit than that of the country, and that political and racial slogans will be used to that end. I trust such a policy will not prevail, as it can only stultify efficiency and progress towards sound industrial development."

The following are extracts from the address of His Excellency the Viceroy:

Post-war Planning

" I do not propose to enter into details of our post-war planning. As men of business, you will realize the possibilities and the difficulties. I will deal only with two broad aspects—the relations between agriculture and industry and the financial problems.

" Though it does not arise directly out of Mr. Mealing's address, I should like to make a few remarks on the relative importance of agriculture and industry in the post-war development of India. I feel that there may be a tendency in our plans to stress industrial advance at the expense of agriculture. There is some reason for this. Industrialization shows quicker and more obvious results, enriches a country and enables it to spend more, both on luxuries and on social services, such as health, education and communication. Also, I am afraid, men of business have more influence than farmers in the direction of State affairs.

" But industrial expansion should not, and must not in India be accomplished at the expense of agriculture, which is still the employment of about three-quarters of the ever rising population.

" It is essential that in your post-war organization the Indian farmer should be assured of prices for his produce that will both improve his own standard of living and will encourage him to produce the additional food needed for the proper nutrition of the existing population and of its normal growth.

" India cannot go back to the spinning wheel, and must develop her industry, but she should consider well these and other examples of the price that may be paid in human health and life for too hasty or too speedy industrialization.

" The financing of progress such as India must make is a very complex problem. One fact is inescapable. If you want progress—and India not only wants it but must have it—you have got to pay for it. No financial jugglery can produce for a nation in the long run greater wealth than that with which it has been endowed by nature in resources of minerals and such like, or which the skill, enterprise and hard work of its population have earned. It is the business of a nation's financial advisers to see that its wealth is fully mobilized, wisely used and so distributed as to benefit the greatest possible number of the population.

" One direction, however, in which it seems to me that we can make progress at once, without waiting for peace or for blue-print, is in training the many technicians and experts India will require—in farming, in engineering, in electricity, in chemistry, in fisheries, in building, and so forth.

" It has been very patently brought home to me even in a year's experience as Viceroy, how woefully short India is not only in persons trained in the applied sciences but in institutions and facilities for training them. I hope that young India will apply its abilities and energies towards these practical branches which will be of such value to India: and possibly a little less to the profession of law in which I understand India is already quite reasonably well staffed.

Sterling Balances

"Before I leave this subject of post-war development, I will mention very briefly two points. The first, which was mentioned by your President, is the matter of sterling balances. I share his entire confidence that these debts will be honoured. But that does not, of course, mean to say that India will at once after the war receive a payment of so many hundred millions in cash. She could not spend such a sum in the international market if she did. The manner of payment of international debts incurred during the war will require much discussion and negotiation. I am quite confident that in these negotiations, the value and magnitude of India's contribution to the Allied war effort will be recognized: that her needs will be considered: and that the manner of liquidation will be arranged to meet her planned development. I do not see that political considerations need affect the settlement.

"The other matter on which I should like to say a very few words is the relations between the British and Indians in business. As I said here last year, I believe there is a cordial spirit of co-operation towards Indian business at present in Great Britain: and the sooner that representatives get together the better. I am, therefore, sorry that it has not yet been possible for the projected visit of Indian industrialists to the United Kingdom to be carried out. I hope that it will not be delayed much longer."

Resolutions

The following were among the resolutions passed at the annual meeting:—

"This Association reaffirms the resolutions adopted last year on the subject of post-war trade policy and post-war reconstruction. With the end of the war in sight, and with long-term plans under preparation for raising the general standard of living by an intensification of agricultural and industrial expansion and development, the Association is further strengthened in its conviction that for the successful pursuit of the reconstruction policy a better balanced and more scientific tax structure based on what agriculture and industry can bear is an essential prerequisite: it, therefore, urges that at the earliest possible opportunity an inquiry be undertaken with a view to evolving a tax system which will be conducive to, and which will promote the objective of the reconstruction policies."

"That whilst appreciating the necessity for exercising controls in time of war over various commodities in order to ensure their most equitable distribution having regard to the amount of these at the nation's disposal, this Association places on record its opinion that where there is frequent overlapping and duplication by different ordinances and/or any other war-time emergency legislation, steps should be taken by the Government to ensure that these do not react to the detriment of the normal long-standing legitimate channels of trade.

"Further, that this Association urges on the Government the necessity for an assurance that as circumstances permit, prompt action will be taken to free trade from unnecessarily irksome control, thus avoiding the danger of unduly prejudicing a return to, and the future of, normal trade in this country."

"Having regard to the continued improvement in the war situation and in view of the substantial amounts standing to the credit of the funds under the schemes this Association recommends that, for the present, no further premia be collected in respect of the War Risks (Goods) Insurance Scheme, and that the payment of premia towards the War Risks (Factories) Insurance Scheme cease after 31st March 1945, but that Government continue to provide cover against war risks under the schemes and that the position of the two funds be reviewed before the end of the year 1945."

Employers' Federation of India, Bombay

Annual Meeting

THE following are extracts from the presidential address of Sir Homi Mody at the 12th annual general meeting of the Employers' Federation of India, held at Bombay, on Monday the 18th December 1944:—

State and Industrial Planning

"A notable lead was given to the idea of planned economy by the Rs. 10,000-crore Plan sponsored by some of the most eminent of our industrialists and economists, and there is no doubt that, in focussing attention upon the fundamental problems of the country and upon the tasks that lie ahead, they have rendered a public service. Since then, various plans have seen the light of day, some more ambitious, some less, and it would appear as if a regular competition had set in, in which the aim of some of the participants was to outclass and outdistance the original planners. It is not my purpose to join in the fray. I only wish to offer a few observations on the question of the role of the State in industrial planning, which is of the essence of the problem. On this fundamental issue, it would be as well if we waited and watched the developments that are taking place in the two greatest democracies of the world where political and economic liberties have achieved their highest consummation. Our admiration of the heroic achievements of Russia must not hustle us into an unquestioning acceptance of State control and regimentation of the economic life of the country. We need to pause and consider the price that must be paid. As Mr. Geoffrey Crowther of the *Economist* has said, 'a wholly planned economy is incompatible with any degree of political freedom. The possibility of a man's earning his own living in his own way, without let or hindrance, is the essential condition of there being any freedom of discussion, any freedom to oppose. If more than a fraction of the electorate come to depend for their livelihood upon the temporary masters of the mechanism of the State—that is, upon the politicians—then Democracy is at an end.'

State Control *vs.* Private Enterprise

"With the general objective of all plans of reconstruction, everyone must be in agreement. It has been admirably stated in the Philadelphia Charter, which lays down that 'all human beings, irrespective of race, creed or sex, have the right to pursue both their material well-being and their spiritual development in conditions of freedom and dignity, of economic security and equal opportunity.' Surely, there is more than one road to the attainment of this goal. As pointed out by Mr. Oliver Lyttleton a few months ago, the ultimate objective is to combine the organizing power of the State with the enterprise and initiative of the individual, and, as a general principle, he suggested that public services from which risk had been eliminated and which depended on statutory rights, should be provided by the State, that the field where risk had to be run should be left to private enterprise and that private enterprise, having run the risk, should be allowed to reap the profit. In broad outline, I am inclined to agree with this enunciation of policy. We must steer clear of both extremes and find a middle path. Unregulated capitalism is as much to be avoided as economic regimentation of the type which seeks to supplant individual initiative and enterprise by the machinery of the State. Industrial expansion in this country can become an accomplished fact only if the organizing powers of Government are employed as an aid and a corrective to private enterprise, and not for the purpose of an overriding control.

On the Labour Front

"On the labour front, there has been the usual activity at Delhi, but few shots have been exchanged. The machinery of the Tripartite Labour Conference has helped to bring about a closer understanding of the aims and a better appreciation of the difficulties of each side. The Federation's attitude towards questions of social security has been defined on more than one occasion. We have supported the concept of a better social order, and we have demonstrated our readiness to move with the times. All we have pressed for is that proper regard must be paid to the special conditions of Indian industry, and that concentration on the conditions of life of a very small section of the population, without any consideration for the general standard of living of the masses, cannot be regarded as fair and rational.

"Coming to particular measures, it will be remembered that last year the Tripartite Labour Conference passed a resolution in pursuance of which a Committee has been appointed to investigate questions of wages and earnings, employment and housing and social conditions generally of industrial workers. When the necessary data have been collected, a mixed committee will be set up to formulate plans of social security. When such a body is formed, I have no doubt the representatives of industrial interests will approach its deliberations in a spirit of helpfulness. The Bill to provide for at least six days' holidays with pay to industrial workers stands referred to a Select Committee of the Central Legislature. Many employers have adopted more liberal schemes of holidays, and while, therefore, we could have no objection to the principle of the measure, we feel Government have not been well advised in introducing legislation regarding a matter in which employers were providing tangible evidence of their goodwill. Sickness insurance is another of the subjects on which an early decision is likely to be taken. Our viewpoint on this measure has been unequivocally expressed; we are willing to shoulder our share of the burden as soon as a satisfactory scheme, providing for an equitable distribution between the State, the employers and the workers has been evolved. Government, however, have not been very helpful on this point; the Provinces seem opposed to contributing anything to a scheme which would benefit only a particular section of the population, and the Centre has not yet made up its mind. Government would appear to have a congenital reluctance to doing anything which would affect their own finances. One can understand it, as they have always been playing with other people's money. We have heard nothing, for instance, about the demand put forward by the textile interests of the country for an adequate allowance in the matter of rehabilitation of capital goods which have been subjected to special wear and tear in working under war conditions. The Central Board of Revenue are lying very low on this subject; I suppose they believe in wearing out their opponents.

Permanent Tariff Board

"Sir Ardeshir Dalal, in a recent statement of policy, indicated the possibility of the establishment of a permanent tariff board on a very high level, which would deal not only with protection to industries, but also with problems of industrial development, investment, licensing of factories and the like, in the post-war period. The creation of such a body is a matter of urgent necessity. Not only does the policy of discriminating protection call for a radical revision—a subject on which some of us have been agitating for years—but the issues involved in State-aid to planning and development demand expert scrutiny at the hands of a body in which the public has confidence. A properly constituted tariff board, or board of trade, would be of great help in the solution of the many problems that will confront Government in implementing their policy of an ordered development of industry."

Sir Ness Wadia's Speech

In seconding the adoption of the Report, Sir Ness Wadia said: "Your Chairman has drawn your attention to the fact that proper regard must be paid to the special conditions of Indian industry, and that concentration on the conditions of life of a very small section of the population without any consideration for the general standard of living of the masses cannot be regarded as fair and rational. He has also placed before you the various measures which the Government of India have brought forward in introducing legislation regarding holidays with pay, sickness insurance, etc. All these measures of Government are worthy of attention and deserve our support provided that labour responds to the adoption of such measures by increasing its efficiency. These measures will, however, increase the cost of manufacture, which can only be kept down if by increased efficiency we get increased production and the cost of production does not go up.

" Recently, the Government of the United Kingdom sent a mission to the United States of America headed by Sir Frank Platt. Their report refers to the American cotton spinning and weaving mills and compares the productivity of labour in America with that of labour employed in British mills, pointing out the differences between the two countries. With normal staffing, British production per man-hour is less than the American by approximately 18 to 49 per cent. in spinning, 80 to 85 per cent. in winding, and 56 to 67 per cent. in weaving. Therefore, for a given output considerably greater labour force is required in the British mills than in American mills. British labour requirements exceed the American by approximately 22 to 98 per cent. in spinning, 400 per cent. in winding and other departments, and in coarse and medium count spinning by 12 to 63 per cent. If that is the position in the United Kingdom as compared with the U.S.A., I wonder what the position will be in Indian mills, and how the efficiency of Indian mills compares to that of the U.K. and the U.S.A.?

" Therefore, it is of the utmost importance that, if the security measures proposed by the Government of India are to be adopted, labour must respond with greater efficiency and help to keep down the cost of production. But unfortunately my experience in Indian mills is not encouraging. We get a good deal of efficiency from labour if it is properly looked after, where piecework prevails in weaving, but in others it is woefully lacking. I find that, during the last four years, since the introduction of dear food allowance, labour has not been making any effort to increase efficiency—in fact, owing to the very high amount of dear food allowance they get, they do not even care or try to increase it; on the contrary, in some cases, efficiency has gone down, specially in winding and reeling. The question, therefore, is: Will labour respond and try to increase its efficiency and make it possible for Indian mills to face competition? Again, in India most of the mills have two looms to a weaver, in the U.K. one woman attends to 4 looms, and in the U.S.A. they attend to something like 8 to 10 looms and very much more in automatic looms. In America greater economy is thus secured in the utilization of labour by permitting operatives to supervise more units or machines where practicable. Therefore, all such security measures as are proposed by the Government of India are possible only if labour will respond by increasing its efficiency per man-hour or per machine. I would like the Employers' Federation to take up this subject, and have a record of the output turned out per man per hour."

The East India Cotton Association, Limited

President's Speech at Annual Meeting

IN the course of the speech delivered by Sir Purshottamdas Thakurdas, President, East India Cotton Association, Ltd., at the twenty-third annual general meeting of the Association held in Bombay on Friday, the 22nd December 1944, he said:

" During the year under report, for the first time in history, the Government of India bought Indian cotton on an appreciable scale to support prices. The figure of such total purchases, both in Bombay and up-country till August last, as reported by the Textile Commissioner, is given in the report and to date they amount to 277,920 bales. The trade undoubtedly recognize that these purchases, whether they steadied the cotton market or not, did prevent further deterioration in prices of cotton. The Report deals at some length with discussions by your Board with Sir Cyril Jones, when he was Acting Finance Member to the Government of India, and with Sir Akbar Hydari. Although the Government did not accept certain suggestions of your Board regarding the working of the hedge contract and other details in connection with purchases of cotton by them, I am glad to record that whenever any suggestions were brought to the notice of the Textile Commissioner on behalf of the Government of India, immediate attention was paid to them and the views of your Board were fully examined. While there have been undoubted differences of opinion between Government and your Board regarding the institution of control over cotton and the fixation of rates, the working of the Government scheme, such as it was, has been fairly smooth.

U.S.A. Subsidy

" As we approached the end of the cotton year, and when there was a glimmer of hope of the partial opening of the Continental markets, the U.S.A. Government sprang a surprise by notifying their intention of giving a substantial export subsidy to American cotton. Necessary representations protesting against this were made to the Government of India. I am glad to be able to say that the Government have taken prompt steps in this matter and have conveyed correctly to the Government of the U.S.A. the reactions of the Government of India in this matter. I am looking forward to a clearer appreciation of our point of view as a result of the special officer's visit to America. I hope that, on his way from America to India, he will be deputed by the Government of India to visit Liverpool and London with a view to arrange for disposal of the stocks of cotton lying in India which the Continent used to buy in normal times. These accumulations of cotton have been piled up as a result of the loss of the Continental markets and latterly of the Far Eastern markets, and also owing to the absence of any crop planning policy from the Centre to adjust our supply position to the internal needs. These stocks now lying in the country tend to weaken the statistical position to the detriment of the growers, and I have no doubt that the Government of India will do their best for the disposal of these accumulations in the foreign markets which need these supplies.

Planned Crop Production

"In the meantime a sub-committee of the Indian Central Cotton Committee has recommended what has been called planning of the cotton crop of India, both in the immediate future and for long term. They have already made their report and with the acceptance of that report by Government, the avoidable burden hereafter on the cotton market should be lightened. Regarding long-term planning of cotton crop the sub-committee has naturally recommended that it is desirable to watch the final stage in the international upheaval under which the world has been for the last five years, and indeed the policy for distribution of raw materials after the war. The Board of the Association has been trying its best to help to devise methods of marketing the grower's cotton crop to the best extent that circumstances permit. It may be of interest to note that whilst there was a negligible minority in the cotton trade definitely against forward trading being opened, even Liverpool has now thought it necessary to press the Government of the U.K. to allow forward trading to be started there. And this move has found unequivocal support from the recent unofficial International Conference in the U.S.A. which urged early restoration of private enterprise and the reopening of the Liverpool futures market. If this be necessary for a consuming centre like Liverpool, it stands to reason that for producing, distributing and consuming centres like Bombay and Karachi the closure of the forward cotton market would have been an absolutely unjustified step. I feel that the cotton trade and the grower of India may fairly infer from this that the decision taken by the Association and the 'D' Committee of the Textile Control Board has, on the whole, been vindicated. It is upto everybody in the cotton trade and upto the Government of India to see that the contract which has been in operation is worked in the correct spirit in which it was meant to be, in the interest of all concerned.

"During the last few weeks, a sub-committee of the Cotton Movements Committee, which was asked to report on the question of disposal of about 50,000 bales of last year's Westerns cotton grown in Adoni, Bellary, etc., has made definite recommendations for the relief of the holders of this cotton. The report has been unanimous and is awaiting the decision of the Central Government. I hope that it will be accepted under the special circumstances referred to in the report. This will be a very welcome proof of the solicitude of the Government for the grower and others concerned in the disposal of their crop in such unforeseen circumstances. The Cotton Crop Planning Sub-Committee that I have referred to earlier has definitely recommended that no seed of this inferior quality be allowed to be sown in the years to come, and, therefore, there should be no fear of a repetition of such a contingency arising again. I hope that the unanimous report of this sub-committee will be accepted by the Government of India, especially as they have a large sum at their disposal for the specific purpose of giving relief to the cotton growers of India.

"Before concluding, I would say that if, as a result of the acceptance of the crop planning as recommended by the Central Cotton Committee, the cotton crop of India is adjusted to domestic needs, certain changes may be necessary in the futures contract. When the Indian Cotton Contract was evolved, there was a prospect of a crop of 60 lakh bales as against a possible consumption of 40 lakh bales, and, in order that the contract may not become a bear contract, certain provisions had been introduced; for example, 12½ per cent. discount on varieties other than Jarilla. With the crop adjusted to domestic needs, this provision may have to go, if the contract is to be saved from a squeeze."

The Millowners' Association, Bombay

The All-India Handloom Board.—The Textile Control Board approved Government's proposals to create an all-India Handloom Board and its functions, subject to the proviso that it would not make any direct recommendations to the Government of India which would adversely affect the working of the spinning and weaving mills; such recommendations, if any, should be referred back to the Textile Control Board. All handloom and powerloom factories which did not come under the Indian Factories Act are to be within the purview of the Handloom Board.

Compensation for Involuntary Unemployment.—The Association has asked Government to make the position clear as regards the scope of the regulation and the eligibility of particular classes of workers for benefit under the scheme. They want uniform rates and conditions of payment to be statutorily enforced throughout British India and Indian States.

Revised Constitution of the Export Advisory Council.—The Association feels that the interests directly interested in the export trade in cotton piecegoods and yarn are not adequately represented on the Council by the inclusion of two nominees of the Textile Control Board. They suggest that the two or three members from the Advisory Committee which had been set up to assist the Export Trade Controller at Bombay might be included in the revised Export Advisory Council.

The Cotton Textiles Fund Ordinance, 1944.—Reference was made the other day to the representation made by the Association to the Government suggesting cancellation of the amendment to the Cotton Textiles Fund Ordinance which empowered the Collector of Customs to exempt from the cess goods which, in his opinion, were exported for a purpose connected with the prosecution of war.

In reply, Government stated *that clear instructions had already been issued to the Collectors of Customs to exempt from the cess only goods indented for actual defence requirements by the Defence Authorities and that in the circum-*

stances, there was no possibility of the exemption being extended to other transactions.

Joint Adjudication of Trade Disputes—Defence of India Rule 81-*A*.—We have referred already to the views expressed by the Association on Government's proposals for the amendment of Rule 81-A of the Defence of India Rules with a view to provide for joint adjudication of trade disputes in similar undertakings under certain circumstances. Briefly stated, the Association were of opinion that there should be no extension of the scope of the adjudication except on a joint application by employers and labour concerned.

The question was, however, reconsidered by the Association towards the end of November, and although they adhered to the previous view, namely, that adjudication should not be extended except on joint application of both the parties, they agreed to accept Government's revised proposals as an emergency measure, if Government, and only if Government agreed to use the powers in most appropriate cases.

Indian Merchants' Chamber, Bombay

Quotations Offered by the British Manufacturers of Machinery, etc.—In their communication dated 24th November addressed to the Department of Planning and Development, the Committee referred to the question of high prices being quoted by British manufacturers of machinery while registering orders from Indian firms. They also referred in this connection to the conditions which the British manufacturers imposed on Indian importers to deposit a sum in rupees as earnest money equivalent approximately to 5 per cent. of the nominal total net f.o.b. to be paid while the order was being entered into the maker's book to rank for priority; the amount so deposited was to be forfeited in case Indian importers decided to cancel their orders.

The whole question of priority and arrangement to import machinery, the Association observed, was discussed by them with the Member for Planning and Development and added that Government should issue a Press *communique* asking Indian importers to wait till Government had consultations with the British manufacturers.

Utilizing Industrial Research and Granting of Exclusive Rights.—As published in the May issue of the *Journal*, the Association had addressed a letter to the Council of Scientific and Industrial Research in connection with the schemes of research ready for commercial utilization. The Board of Scientific and Industrial Research, in their letter dated the 10th November, informed them that their presumption that exclusive right was given to a single party for commercial exploitation was not correct and added that:—

(i) Every process before being offered for commercial exploitation was examined as regards economic implications, demand and mode of production and the decision was guided by such an examination.

(ii) Depending upon the circumstances of each case the processes were offered for industrial exploitation in any of the following ways:—

(*a*) Free of any charge or against a uniform rate of royalty to all interested parties.

(*b*) On regional basis, the royalty in each case being the same.

(*c*) On monopoly basis.

The Association in their reply dated 20th November suggested that the present system should be substituted by system of licence in order to give greater opportunities to a large number of applicants to take advantage of the schemes in question and added that they would like to be informed as to the number of non-technical notes issued for successful researches, and also desired to know as to how many licences were taken and how many of them were successfully worked up. In conclusion, the Committee submitted that their object in addressing this letter was to urge upon the authorities to introduce a licence system by which industrialists would be in a position to take advantage of the researches carried on under the ægis of the Council of Scientific and Industrial Research Board.

Karachi Cotton Association Ltd., Karachi

Report for the Year 1943-44.—The following are extracts from the annual report of the Association indicating the most important subjects dealt with by them during the year 1943-44.

Prices

The cotton "futures" markets of Bombay and Karachi continued to remain closed at the commencement of the year under review until the end of October when the Central Government permitted the Bombay market to open hedge trading for 1943-44 crop in the Indian Cotton Contract under rigorous safeguards. The heavy declines in the spot values which had followed the closures in May 1943 in pursuance of prohibitions imposed by Government in hedge trading were carried forward into the new year which opened with Sind spot Rs. 25, Punjab spot Rs. 23, 4-F spot Rs. 49 and Sind N.T. spot Rs. 57, 1942-43 crop quotations. Export demand in Deshi varieties in September firmed up their prices to Sind spot Rs. 39, and Punjab spot Rs. 32-8 which, however, eased off at the end of November to Rs. 30-8 and Rs. 26-8 respectively. In the absence of mill and export demand, staples continued to decline and were quoted on 20th November of 4-F. spot Rs. 44-4 and Sind N.T. spot Rs. 51-4. 1943-44 Sind N.T. spot began to be officially quoted on 20th October at Rs. 64 and 1943-44 4-F. spot on 22nd November at Rs. 50-8. Upon opening of hedge trading in Bombay at the end of October, the Karachi market, apart from its local factors, followed mainly the trends of the Bombay market. Almost until the end of January 1944, the "futures" market of Bombay and the spot markets of Bombay and Karachi displayed remarkable firmness. The withholding movement up-country (particularly in the Punjab), disappointing reports of yield and gin outturns and fair mill demand were the principal incentives of the firmness. The Indian Cotton Contract which was lowest at Rs. 437-4 in November touched highest at Rs. 485-12 in January. 4-F. spot in Karachi touched Rs. 55, in January, Sind N.T. spot in

Karachi which had a setback to Rs. 58 ultimately regained strength at Rs. 63 on 31st January. Upon permission being obtained, Karachi market opened hedge trading on 1st February with 4-F. March at Rs. 54-15 and 4-F. May at Rs. 55-2. Initially the market appeared buoyant, but the buoyancy was short-lived, and the market under crop pressure began to give way, declining on 1st March to 4-F. May Rs. 51-8-6, 4-F. spot Rs. 53-4 and Sind N.T. spot Rs. 57-12. At the end of March, with the news of Japanese attack on Manipur, the market became nervous and registered on 30th March 4-F. May Rs. 50-3, 4-F. spot Rs. 51-4 and Sind N.T. spot Rs. 57-12. Thereafter no reassuring and redeeming factors appeared to sustain the market; continuous selling pressure and almost complete absence of mill and export demand conspired to lead the market to steep declines, 29th April registering 4-F. May Rs. 47-2, 4-F. spot Rs. 47-2 and Sind N.T. spot Rs. 49-8. The prices of all varieties had already gone down much below the floors indicated by Government in their Press Note of 18th November 1943. For instance, Sind N.T. of which the floor indicated by Government was Rs. 59 touched Rs. 49-8, and at this stage Government put into operation its discretionary buying plan by offering to purchase Sind N.T. ⅞″ in the Karachi market and up-country markets at Rs. 49-8 ex-plinth Karachi. This action, however, did not help in preventing the onrushing collapse, and the market on 4th May touched the floor of the contract with 4F May Rs. 46, 4F spot Rs. 46 and Sind N.T. spot Rs. 49. Government immediately put into operation their general buying plan by offering to purchase all varieties tenderable against the 4F. hedge contract at the official spot rates of the Association as of 4th May. 4F July attempted to maintain some strength, but that too touched the floor on 9th June. Until the end of the season there occurred no trade or mill demand. But for Government purchases of passable cottons, values of passable cottons could not have been sustained. With the decline to the floor of the contract and with the declines to prices of varieties much below their floors indicated by Government in their Press Note of 18th November 1943, the market sustained heavy losses which, no doubt, would have been aggravated if Government had not purchased freely the passable cottons. At the same time the market could not escape a further misfortune in that what could not be passable for Government suffered comparatively heavy discounts, if at all a buyer could be found. Until the end of the year under review Government did not reach a decision on opening of hedge trading in 1944-45 crop. Upto 31st August 1944, Government's purchases in the Karachi market and in Sind and Punjab totalled 68,784 bales.

Raw Cotton Receipts and Exports

Receipts into Karachi totalled 956,544 bales as compared with 878,731 bales during the previous year. Receipts from Sind increased by about 177,000 bales while those from the Punjab declined by about 100,000 bales. As evidenced by pressings, Sind crop was bigger by about 100,000 bales and the Punjab crop smaller by about 166,000 bales. Shipments from Karachi totalled 875,236 bales as against 745,188 bales during 1942-43. The main increases were in shipments to the U.K. by about 135,000 bales, U.S.A. 60,000 bales, Australian ports 7,560 bales while Asiatic ports and Indian coast ports took less by 4,000 bales and 58,000 bales respectively. During the season shipments by country craft totalled 120,503 bales as against 85,615 bales last year.

The Indian cotton trade situation, resumption of trading in "futures" (hedge) contracts in Karachi and Bombay in 1943-44 and 1944-45 and Government buying of Indian cotton (1943-44 crop) and other problems, viz., export trade control on shipments of Indian raw cotton to U.K. and Empire countries, fire insurance of cotton stored in Karachi and in transit, cotton transport by rail, country craft and steamer, storage accommodation for cotton and commodities in Karachi, supply of steel baling hoops and coal for ginning and pressing factories in the province of Sind, proposals for substitution of Karachi 4F. hedge contract by N.T.—289F. hedge contract, etc., received careful and day-today attention of the Board during the year under review.

Karachi Chamber of Commerce, Karachi

Import of Woollen Goods.—In a communication dated the 20th September, 1944, the Chamber drew the attention of the Assistant Director of Civil Supplies, (Textiles), Karachi, to the effect that there had been some difference of opinion on the question of imports of woollen cloth containing cotton. Previously on referring the matter to the authority concerned, a member was advised that woollen cloth containing more than 10 per cent. of cotton would be considered as cotton cloth and hence would be price marked on its arrival at the port of entry.

The Chamber pointed out to the Assistant Director of Civil Supplies that a large proportion of woollen cloth goods imported into India contained a percentage of cotton higher than 10 per cent. and could in no way be regarded as "cotton cloth." In this connection the Chamber made a reference to Notification No. 1/2(29)-44 C.G. (C. S.) of 8th April issued by the Department of Industries and Supplies, Central Government, wherein under clause (*c*) of sub-section (1) of section 3 of the Hoarding and Profiteering Ordinance maximum prices of woollen goods of certain specifications were fixed. This related to woollen goods ranging from 60 per cent. wool up to all wool. From this it was contended that the intention of the Government of India was to include such mixtures as woollen goods and not cotton goods.

Further, if woollen mixtures were classified for duty under item 48 (6) of the Indian Customs Tariff, they were recognized as woollen goods and not cotton goods. Likewise the Schedule to the Consumer Goods (Control of Distribution) Ordinance 1944, included woollen fabrics (item 12) and it was understood this referred to goods classified under item 48 (6) or other appropriate section of the Indian Customs Tariff.

The Chamber also submitted that no tex-marking was ordered under any section of the Hoarding and Profiteering (Prevention) Ordinance, but was carried out under the provisions of the

Cotton Cloth and Yarn (Control) Order. It was considered, therefore, that the action of the Assistant Director of Civil Supplies, Sind, in ordering woollen cloth (i.e. cloth containing up to 90 per cent. wool) to be texmarked was *ultra vires*, and overlapped the provisions of the Hoarding and Profiteering (Prevention) Ordinance. If, however, such action had been taken in pursuance of special powers invested in him, this Chamber urged that more than 10 per cent. cotton content as a basis for specifying the cloth as cotton goods, was much too low a figure. In the considered opinion of this Chamber all cloth assessed under item 48 (6) of the Indian Customs Tariff should be permitted movement in Sind and beyond as woollens. The Chamber submitted that in no case should goods be classified as cotton cloth unless under 55 per cent. wool content.

Madras Piecegoods Merchants' Association, Madras

Provincial Textile Conference.—A conference of piecegoods interests in the province of Madras was held in Madras early last month under the auspices of the Madras Piecegoods Merchants' Association. Thirty-three associations and chambers of commerce from various centres were represented. The following were some of the more important resolutions passed at the conference:—

"After having considered the outline of the A B C scheme whereby an effort is being made to separate direct quota holders from the rest of the wholesalers, this Provincial Conference of piecegoods interests is of opinion that there should only be two classes of licensees, namely, wholesalers and retailers. It is further of opinion that a merchant should have only one kind of licence, either wholesale or retail, except in cases where a merchant was having both wholesale and retail business before the commencement of the Cotton Cloth and Yarn Control Order, 1943."

"This Provincial Conference of piecegoods interests is of opinion that 12 yards or more per adult should be the basic quota for this province in case it is found not possible to allot a bigger yardage."

"Whereas the merchants of the Madras Province have to pay 3 per cent. by way of sales tax from out of the statutory margin of profit of 20 per cent. allowed under the Cotton Cloth and Yarn Control Order 1943, and whereas the merchants of other provinces enjoy the full benefit of 20 per cent. profit, this Conference suggests that sales tax on turnover of sale of cloth should be abolished till such time the Cloth Control Order is in force or in the alternative to reduce the incidence of tax to one-fourth per cent."

"The production and delivery of quota goods by mills are of such nature as to necessitate the wholesale dealers to club together different varieties of cloth packed in different months while selling to retail dealers who at the same time enjoy no such right of clubbing, with the result that retail dealers are always left with certain stocks of goods for which there is no appreciable demand from the consuming public. Under the circumstances this Conference requests the authorities concerned to permit a retail trader to liquidate such holdings by persuading the consumers to take them along with other better selling lines and such persuasion is not to be construed as an offence under the Cotton Cloth and Yarn (Control) Order."

"This Conference of piecegoods merchants recommends to the Provincial Textile Commissioner that the handloom piecegoods other than those intended for export need not be price marked or fixed for the present."

"This Provincial Conference is unanimously of opinion that export prices for handloom goods going to Ceylon should be fixed only by the textile authorities in India in consultation with the trade as is being done for mill-made cloth and that pending the decision of the Government of India as to the feasibility of extending the scheme prepared by the Provincial Textile Commissioner, Madras, to other parts of India, the said scheme should be brought into operation and requests the Government of India to induce the Ceylon Government to postpone the Retail Price Regulations recently introduced in this behalf by the Ceylon Government inasmuch as the prices fixed by them have no reference to trade qualities and ruling prices of handloom goods in India.

"Further, this Conference is of opinion that certain duties now devolving on the Export Textile Co-ordinator for Ceylon in India and more particularly those relating to the authentification of invoices and of stamping a texmark on handloom cloth exported to Ceylon are superfluous and are responsible for causing considerable delay and inconvenience as certain institutions like chambers of commerce, etc., are already authorized to certify prices and further in that the Provincial Government is agreed in principle on fixing prices for all exportable cloth with the assistance of the trade."

"As dealers in the surplus areas supplying this zone often compel the dealers here to take substantial portions of hand-dyed, hand-printed and other unprice-marked cloth against their quotas, this Conference requests the Provincial Textile Commissioner, Madras, to make suitable representations to the Textile Commissioner in Bombay for discouraging this practice. It is apprehended that otherwise a very large share of the cloth exported into this area by the market will be offered in the shape of *Karkhana* prints and other unattractive material."

"This Conference requests the Provincial Textile Commissioner to recognize district associations of textile interests which dealers are anxious to see actively functioning and associate them with the textile control staff in the matter of the administration of the various Control Orders."

Indian Chamber of Commerce, Calcutta

Third Quarterly Meeting.—The following are extracts from the presidential speech of Mr. B. M. Birla, delivered at the third quarterly general meeting of the Chamber held on Friday, the 5th January, 1945, at 4 p.m.:—

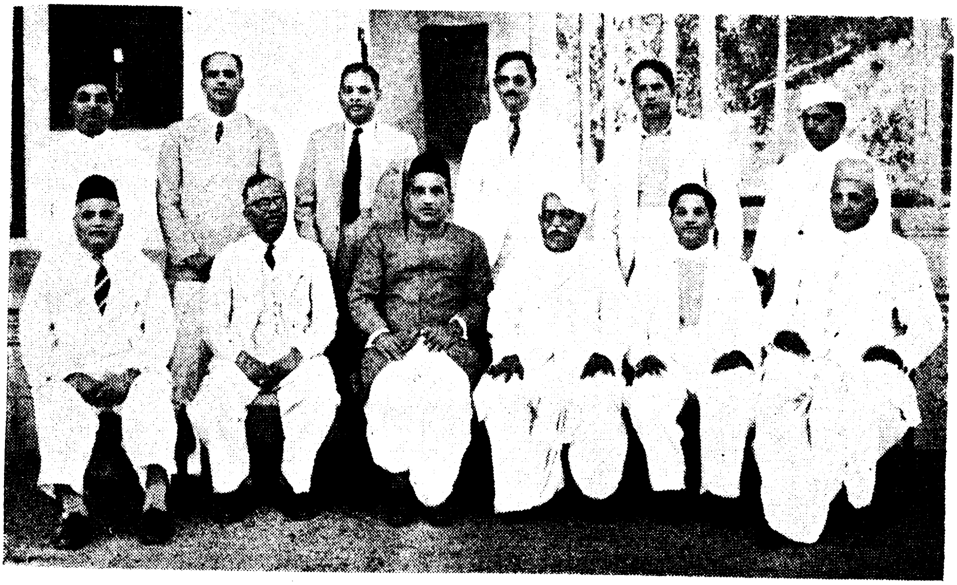
"The revision of the law in regard to patents is becoming necessary. Foreign manufacturers register their patents in this country but they are registered for the protection of their patent rights rather than for allowing the articles thus protected to be manufactured in the country. As you know, the very principle of patent law is to protect a country's nationals. It should be the duty of the Government to revise the patent law in such a way that patents registered by foreigners are given to Indian nationals who desire to exploit them, if necessary on a royalty basis. If we have to invent every device before adopting it, it would take us generations to catch up to present European standards. The amendment of the patent law is, therefore, a matter calling for urgent attention.

"There is also the important question of the railway rate structure. Before the war a number of railways belonged to British companies but now most of them have come under Government management. It would be cheaper and more efficient if the administrations of the different railways were amalgamated and the management centralized. The different railway systems should now be treated as a single unit. For instance, there should be uniformity in rates. Formerly if traffic passed from one railway system to another it had to bear differential rates depending on the railway on which it travelled. Now traffic should be treated as uniformly on one system and the deduction due to the telescopic effect on the rates should be available for all long-distance traffic. This will make goods available cheaper to our countrymen and will promote the establishment of industries in the most economical areas. The railway administration should, therefore, go into the question deeply and arrange that a proper railway rate structure is worked out before the termination of the war to enable industries to be established and distributed in the most suitable way in the post-war world.

"So far as the future is concerned, the statement made by the Planning Member in regard to the liberalization of the protection policy is good as far as it goes. But merely establishing a permanent Tariff Board is unlikely to solve our difficulties unless in the case of major industries, like those relating to machinery manufacturing, automobiles, aircraft, shipbuilding, etc., an assurance of protection is given in advance so that manufacturing may proceed with a guaranteed market. We trust that Mr. Amery's recent pronouncement about the fiscal autonomy of India and the progress which might be made by protecting her industries would be followed in actual practice. When efforts were made to protect our industries in the past, there were always obstacles to be encountered."

Kathiawar Millowners' Association, Bhavnagar-para

A meeting of the members of the Managing Committee of the Kathiawar Millowners' Association was held recently at Bhavnagar to consider the scheme formulated by the Textile Commissioner, Bombay, for the supply of cloth to the Western India States. Two preliminary meetings were held at Rajkot, with Seth Shantilal Mangaldas, B.A., President in the chair, when representatives of various States, textile mills in Kathiawar and merchants were present and the Association decided to extend its wholehearted co-operation in making the scheme successful.



The Managing Committee of the Kathiawar Millowners' Association, 1944-45

Sitting :—Mr. Jadulal C. Maharaja, B.A., Seth Bhogilal Maganlal (*Vice-President*), Seth Shantilal Mangaldas, B.A. (*President*), Seth Ratilal Vardhaman, Seth Ramaniklal Bhogilal and Mr. Girdharlal T. Vakharia.

Standing :—Messrs. Ramanlal C. Shah, J. M. Trivedi, Y. D. Jawale, B.A., LL.B., M. P. Khara, D.Com. (I.M.C.), *Secretary*, C. B. Yodh and V. J. Trivedi.

TRADE LETTERS

(From Our Special Correspondents)

Ahmedabad

THE drastic action taken by the Textile Commissioner in freezing the stocks of cloth merchants in Bombay has prompted the local cloth merchants' associations—the Maskati and Panchkuva Mahajans—to adopt stringent measures to prevent black markets. They have already adopted the quota system with the approval of the Textile Commissioner, on the lines of the quota system of Government. Now they have started distributing the quotas of their members to the quota-holders, both local and up-country. Mr. J. K. Thakore, Provincial Textile Controller, who recently visited Ahmedabad, saw the working of the quota system of these two Associations and expressed satisfaction with it.

Ahmedabad merchants foresee coming events and shape their conduct accordingly. They lost their old trade when the new favourite channel was created by the mill agents. After its suppression by Government they are cautious not to create black markets so as to compel Government to suppress them like their brethren in Bombay. They are supplying cloth to their own quota-holders as they receive cloth from the mills according to their quota. But there are a large number of quota-holders who receive no quota or inadequate quota. They are tempted to buy and sell cloth in the black market. The two associations contemplate supplying cloth to their own members who are non-quota-holders to enable them to continue their trade. Still about 50 per cent. of cloth merchants are not members of either of the two associations and they are threatened with extinction. They are inclined to create black markets unless Government cancel their licences.

There is another source of black markets. Government have not yet fixed the rates of printed and dyed cloth. Mills which were not printing or dyeing their cloth before, are taking to these processes, and charging fancy prices from their quota-holders who in their turn do the same. The hand printers and dyers in consequence are losing their trade, and have no other alternative but to resort to black marketing. Of late, they have closed down their works and made representations to the authorities. The cloth merchants' associations are willing to accommodate them on the basis of their quota system, but very few hand printers and dyers have quotas. They too, like the numerous cloth traders, have taken to printing and dyeing to take advantage of war conditions. Government should fix the rates of dyed and printed cloths like those of the other varieties of cloth to put a stop to the most potent cause of black marketing in the country.

It is a stupendous task which Government has undertaken to control the distribution of cloth. The zone system which is intended to distribute cloth evenly from the surplus to the deficit areas is not working smoothly. Out of 50,000 bales to be despatched to various distribution centres from Ahmedabad only 29,000 bales were despatched during December. This has created a serious situation both in Ahmedabad and the up-country centres. While stocks are accumulating in Ahmedabad godowns, the up-country centres are suffering from acute shortage of cloth. The condition is reported to be worse in Bombay where there is greater accumulation of stocks after Government has undertaken the whole distribution of cloth. It is hoped that Government will soon improve its distribution machinery which is not working as it should.

Why Not an American Loan ?

Mr. A. D. Shroff, one of the signatories of the Bombay Plan, delivered a public lecture in Ahmedabad. He suggested that the Government of India should raise a loan in America against the sterling balances of India, accumulated in London for purchasing capital goods needed for the economical development of India if England could not return those sterling balances to India owing to her economic plight. India needs capital goods which America can supply. If England cannot return the sterling balances to India, she should allow India to raise a loan in America to purchase capital goods. He described the interest taken by America in the economic development of India, and was confident of the success of a loan in America. England is not expected to return the sterling balances to India, but she can be induced to raise a loan in America for India.

University for Gujerat

The idea of a Gujerat University has been mooted by Mr. Amritlal Hargovindas, a mill agent, who founded the Commerce College in Ahmedabad by donating Rs. 60,000. He saw eminent Gujaratis like Mr. K. M. Munshi and others who have formed an association for the establishment of the Gujerat University. This Association is preparing the plan of the University and collecting donations. The industrialists of Gujerat, though welcoming the idea of the Gujerat University, are not sufficiently enthusiastic about it. They have joined the University Association, but have not given donations yet.

There is also no unanimity regarding the location of the University. Mr. Pattani, Dewan of Bhawanagar, suggests the creation of a new University town on the bank of some river. The Association should call a conference to focus public attention in Gujerat on the question of the University. If the princes and merchant-princes of Gujerat including Kathiawar and Cutch combined, they can create a model university in Gujerat.

Calcutta

Increase in Bengal's Quota Urged

PRESIDING over the quarterly meeting of the Bengal Millowners' Association, Mr. R. N. Dutt urged an increase in the quota of cloth allotted to Bengal. He referred to the fact that the Textile Commissioner had arrived at some tentative pre-war consumption figures of cloth on the basis of 10.45 yards per head but he did not know the basis on which these consumption figures of cloth had been calculated. The production of handloom cloth, in his opinion, was a very big factor which supplemented the cloth consumption in normal times. It was estimated that the fall in handloom production had been 30 per cent. below normal due to difficulties in getting supply of yarn. Allocation of cloth on the basis of 12 yards per head of the population was, as it was, quite sufficient to meet the requirements of the Province. Apart from the fact that Bengal deserved special consideration, he was surprised that any discrimination should have been made between her and some of the other provinces like Bombay, the Punjab and Delhi whose quota had been allocated on the basis of 18 yards per head. He hoped that the Government of India would fix a more equitable basis for distribution of cloth in Bengal.

India's Export Markets

The reconstituted Export Advisory Council recently met in Calcutta, and it was presided over by Sir Azizul Haque, Commerce Member, and representatives of different trade interests nominated by the commercial bodies and the Central Government were present. The principal subjects discussed were the allocation of quotas among established exporters, possibility of relaxing export control restrictions, desirability of cultivating goodwill in the export markets and the need for strengthening the commercial intelligence and the trade commissioners' organization. In the opinion of some of the representatives, strict adherence to the principle of established shippers tended to place them in the position of monopolists. They emphasized that the time had come when the basis on which quotas were granted at present should be widened. It was suggested that the Indian Trade Commissioners abroad should keep in touch with conditions in India by visits at intervals. The importance of publicity in export markets, particularly those nearer India such as East Africa, Afghanistan and other places was stressed. The establishment of museums at ports was recommended so that tourist traffic, likely to be encouraged after the end of the war, could take advantage of them and acquaint foreign countries with goods manufactured and sold in India. Representatives of wool, hides and skin interests referred their particular problems to the Council. It was suggested that the existing quota system governing the export of wool should be reconsidered.

Warning to Textile Dealers

Addressing a meeting of the Provincial Textile Control Advisory Committee, Bengal's Civil Supplies Minister sounded a strong note of warning to the dealers in textile trade that unless they wholeheartedly co-operated with the Government in their plans for equitable and speedy distribution of cloth and yarn in all parts of the Province, severe steps leading to the complete control of the textile trade of the Province by the Government, would be taken. He referred to the activities of a certain section of traders in carrying on propaganda against the actions of Government and holding up supplies from the market under frivolous pretexts. In expressing his determination to make cloth and yarn available in every part of the province at controlled prices, he assured them that Government was really reluctant to take up the entire responsibility for the distribution of cloth and yarn and that he desired the normal trade channels to function. It was with this end in view that the quota scheme was introduced, that an independent tribunal was set up to deal with disputes and other problems arising out of the scheme and that it was proposed to vest the tribunal with necessary powers so that they could investigate the cases and ensure the enforcement of their decision subject to appeals to the Provincial Government. He was aware of the existence of black markets in fine varieties of cloth and, therefore, all such varieties of cloth were frozen for distribution through a limited number of selected shops. Referring to the question of yarn supply he said that the fate of 20,000 weavers depended on a proper supply of yarn. Under the new scheme yarns of 20s and above were being frozen and the frozen stocks were being distributed among the various sub-divisions on the quota basis. Supplies were also being given to non-spinning weaving families and other deserving institutions. Referring to the difficulties of the weavers and the inconvenience of those in the districts he said that it was proposed to appoint a handling agent who would carry yarns from Calcutta and distribute them to the weavers on ration basis.

Comments on the Warnings

In commenting on the warnings issued by the Textile Commissioner and the Civil Supplies Minister of Bengal, the Secretary of the Retail Cloth Dealers' Association observed that all such warnings seemed to suggest that the trade was responsible for black markets and that the Government was not to be blamed in the least. He did not agree with this view and was of the opinion that non-distribution of the margin of profit between the wholesalers and retailers in the first stage and wholesalers and semi-wholesalers in the later stage, disproportionate stamping of rates, obstacles raised in transport, exceedingly lower quota to the military zones like Bengal, continuous amendments in the Cloth and Yarn Control Order and the loopholes therein left, enforcement of the orders without taking the opinion of all sections of the trade, indifference shown in making the supplies available to the retailers and petty retailers in particular, non-interference with the unjust activities of the Provincial Government, indiscriminate issue of retail licences to the wholesalers and their concerns, failure in detecting and punishing the real big black-marketing wholesalers and indifference in helping the retailers who offered their co-operation in getting hold of the culprits of the above class, might be said to be the main factors in the encouragement of the black market. He appealed to the Government to take into consideration these loopholes, take drastic measures for detecting and punishing the black marketeers and hoarders of cloth and maintain the usual trade channels under strict supervision.

Criticism of the Control Order

Further point to the criticism of the Secretary of the Retail Cloth Dealers' Association is given by the *Amrita Bazar Patrika*, the influential daily of Bengal which, in its editorial comments, observes that the quota scheme, which was designed as a half-way house between an undisguised black market and full Government control, has proved to be a no-man's land for the lawless to forge in. Quota-holders and importers, it adds, many of whom were found to be building up stocks, were put under obligation to sell their goods in the same proportion and in the same varieties to their dealers as in 1940-41-42. The scheme, according to the *Patrika*, began to work but many of the dealers have refrained from giving the required quota list and the Government have now come out with a warning to those dealers who are attempting to frustrate the quota scheme. The *Patrika* regrets that the Government should have taken so much time to come to this decision but it suggests that drastic steps should be taken without any mercy, that racketeers must be punished without any consideration and honest cloth dealers must not be made to suffer for the dishonesty of others.

Returns of Yarn and Cloth

The suggestion that instead of asking cloth and yarn dealers to submit statistical and detailed figures in addition to stock returns, the Provincial Textile Control Office should be required to submit facts and figures of the quantity so far frozen, requisitioned and distributed under permits, has been made by the Marwari Chamber of Commerce in course of a communication addressed to the Commissioner, Department of Civil Supplies, Bengal, protesting against the notification requiring the dealers to submit certain statistical figures. The Chamber points out that all the information required should be made available at the office of the Provincial Textile Controller.

New Textile Control Order

All quota-holders and importers were directed to submit separate returns by 28th December showing month by month their requirements of all varieties of cloth and yarn. Months of the purchases of seasonal goods should be specially noted in the returns. Failure to comply with the above directions will disqualify the merchants from procurement by permit in Bombay, Ahmedabad, etc., commencing from January 1945. All importers other than quota-holders who import cloth or yarn from outside Bengal, e.g., from Bombay, Ahmedabad, Madras, etc., were also directed to furnish to the office of the Provincial Textile Controller by 28th December positively the figures of their purchases during the years 1940, 1941 and 1942.

Restraint of Trade Amongst Retailers

That the recent rule made by the Textile Controller with regard to dealings of textiles by one retail dealer with another is rather injurious, if not suicidal, to the interests of all the retail dealers, is emphasized by the Bengal Retail Cloth Merchants' Association. If the retailers are thus restrained it will be hardly possible to maintain the normal trade channel and it will be extremely difficult for the poor retailer to earn his livelihood and maintain his establishment by selling his goods in small pieces to the small consumer. The restraint, in the opinion of the Association, cripples the retailer, and deprives him of his just and legitimate right to sell his goods to his customers who are either retailers or hawkers and who used to purchase goods from him in bulk. The Association, therefore, suggests that such restraint should be withdrawn and the retailers should be allowed to carry on his trade and to have his dealings with other retailers, hawkers and ordinary consumers. Otherwise, says the Association, the retail trade and the traders will be ruined.

Amendments to the Quota Scheme

Some amendments and additions to the Government's scheme of distribution of cloth and yarn have been notified by the Provincial Textile Controller. Under the amended scheme, quota-holders and importers shall sell their cloth to *bona fide* retailers in Calcutta with whom they had direct transactions or to commission agents in mofussil at a profit of 4 per cent. ex-mill for cloths manufactured within 100 miles radius, and 10 per cent. on cloth manufactured outside 100 miles radius and to wholesalers in Calcutta at 4 per cent. and 8 per cent. for respective radius. Quota-holders of Bengal mills must submit to the Provincial Textile Controller in Calcutta or to Sub-divisional Officers in the mofussil statements of arrival of consignments immediately on arrival. Except those automatically releasable under the notification, no sales are permissible without the specific instructions of the Provincial Controller or the Sub-divisional Officers. Quota-holders and importers shall not dispose of their goods anywhere outside Bengal. Quota-holders and importers of cloth from manufacturing centres in Bengal or outside are permitted to carry on wholesale business provided they satisfy the Provincial Textile Controller that they carried on this class of business before and they maintain a separate identity and separate accounts of the business. They can with the permission of the Provincial Textile Controller sell at ex-mill price plus the actual charges 2 per cent. of their cloth to charitable institutions, staff and relatives.

Basic Chemical Industries

The necessity of closer co-operation and co-ordination between the different departments of the Government, research institutions and the industry for the commercial utilization of the research work carried out in the Universities and research institutions and further development of the chemical and pharmaceutical industries, was emphasized in the Conference of the Indian Chemical Manufacturers' Association presided over by Mr. N. R. Sarker. Referring to the supreme need of setting up a machinery of collaboration between research and industry, Mr. Sarker instanced the case of Soviet Russia which had evolved an elaborate and effective machinery of co-operation between industry and research with striking results. Stress was laid on the development of a powerful coal and coal-tar distillation industry in the country for which there was no dearth of raw material and on which greatly depended the entire chemical and pharmaceutical industry. Concessions, similar to those given by the British Government, should also be liberally granted for promoting industrial research. The Association further urged on the Government to send a mission of Indian technical experts to the United Kingdom, the United States and Soviet Russia to investigate the utilization of by-products and development of allied industries which had grown with the ammonium sulphate industries in those countries.

Training Labour Officers

The University of Calcutta has now undertaken for the last three years a course for Social Welfare Work and the third course has commenced for the third year with 19 labour welfare officers from various parts of India, nominated by the Central Government, and 22 officers attached to different industrial organizations in and around Calcutta. During the first year 22 labour welfare officers attended the course while last year the trainees numbered 26, of whom six were nominees of the Central Government. The social welfare work course was mainly designed by the University in collaboration with the Indian Jute Mills Association for training of industrial labour welfare officers, as both the Association and the University felt that the future industrial labour problem would require scientific handling for which a certain amount of training was necessary. The subjects taught include sociology, statistics, applied economics, psychology, industrial laws and public health and sanitary laws.

South India

Administration of Control Measures in Mysore State

THE Department of Civil Supplies in Mysore, which was constituted by Government on 15th May 1944, for administering the various control orders, has been making every effort to check profiteering and hoarding of cloth. In addition to the executive action which the Department has been taking either for cancelling or suspending dealers' licences, the authorities have instituted prosecutions against twelve dealers for infringement of one or the other of the provisions of the Cotton Cloth and Yarn (Control) Order or the Cloth Dealers' Licensing Order. Three dealers were convicted and sentenced to pay heavy fines ranging from Rs. 100 to Rs. 1,000 and to imprisonment extending up to one month in default of payment of fine. Suspensions and cancellations of licences after departmental inquiries were ordered in 30 cases. In the majority of the cases, the offences related to sale of "un-texmarked" goods or sales at rates higher than the controlled and stamped prices, failure to issue cash bills or credit memo for sales effected. Surprise visits were paid by the Controller of Civil Supplies and the Assistant Controller and the Inspection Staff of the Department from time to time, and a number of dealers' shops were also raided. As a result of the vigorous drive launched by the Department in recent months to enforce the control measures, the wave of hoarding and black marketing, which for a time was rampart, has been brought under control. The Department has taken and is taking vigorous steps to wipe out profiteering in the cloth trade as the law itself gives very decent margins of profit to all dealers, and ensures fair business.

Shankar Weaving Mills

Dewan Bahadur C. S. Ratnasabapathi Mudaliar, Member of the Textile Control Board, declaring open the Shanker Weaving Mills on 23rd December, said that the powerloom industry in the Madras Province had a bright future.

Ramraj Mills

Sir George Boag, Dewan of Cochin, laying the foundation-stone of the Ramraj Mills at Kozinjanpara village near Cochin at the request of Capt. C. R. Mannadiar, stated that the Government intended to extend the Pykara electric power from Chittur to the taluk with a view to encouraging the growth of locally suitable industries and to helping agricultural development.

Madura Mill School Anniversary

Presiding over the third anniversary of the Madura Mills Workers' Colony School at Harveypatti on 16th December, Mr. J. M. Doak, Managing Director of the mills, appealed to the parents to realize their responsibilities and to shape their lives in such a way to be models for their children in the formation of their character and conduct.

The large gathering present included Mr. W. Essex, Mr. A. C. King, Mr. T. K. Sivasamban, President of the Harveypatti *Panchayat*, besides pupils of the mill welfare school and staff.

Mrs. Helen Doak distributed prizes for proficiency in studies, sports and scouting.

Mysore Cotton Control Orders

The Mysore Government have exempted handloom cloth made out of handspun yarn (*khadi*) and handspun yarn from the operation of the provisions of the Cotton Cloth (Dealers Licensing) Order, 1943, and the Cotton Yarn (Control of Distribution) Order, 1943, respectively.

Price Control on Exported Handloom Cloth

The Collector of Customs convened a conference of representatives of trade interess of both Ceylon and India on 19th Dtecember in Madras. There was a discussion on the difficulty of introducing any price control on exported handloom cloth at a time when the internal handloom market and other sections of exported cloth, such as handkerchiefs to West Africa, remained uncontrolled. The difficulty of the Ceylon Government fixing any price without reference to conditions of production in India, was also discussed. There was a general agreement among the trade interests of both India and Ceylon that no landings of cloth up to the end of January 1945 against licences issued upto 31st December 1944, should be liable to the new control. The future control of prices, if any, should be under the direction of the Provincial Textile Commissioner in consultation with the Trade Advisory Committee to be appointed.

The conference was held because the Government of India wanted to ascertain the opinion of South India on the question of the control of prices introduced by the Ceylon Government on cloth and other imports, which caused great hardship to Indian exporters.

American Textiles Distribution Scheme

Great dissatisfaction prevails among the Colombo shopkeepers over the American textiles distribution scheme. The shopkeepers state that the allocation of 360 yards to each trader, irrespective of any consideration such as their business capacity, had done more harm than good. They further allege that their position has been made more difficult and embarrassing by the textile and price-control officials who have made requests for reservations of cloth for themselves and their friends, although it has been pointed out to them that such reservations are prohibited according to the regulations.

Yarn and Cloth Dealers' Licence Fee Enhanced

A Madras Government Press Note states: " A large staff has been employed to enforce the Control Orders relating to cloth and yarn in the Province. In order to cover this expenditure the Government have decided to enhance, as proposed by the Provincial Textile Commissioner, Madras, the licence fee levied now from the wholesale and retail dealers in cloth.

With effect from 1st April, 1945 the fee (*a*) for a licence to conduct business as a wholesale dealer will be enhanced from Rs. 10 to Rs. 15 per annum and (*b*) for a licence to conduct business as a retail dealer will be enhanced from Rs. 5 to Rs. 7-8 per annum.

Raw Cotton Statistics

The receipts of loose cotton at presses and spinning mills in the Madras Province from 1st February to 8th December 1944, amounted to 467,697 bales of 400 lbs. lint as against an estimate of 458,700 bales of the total crop of 1943-44, says a note issued by the office of the Director of Agriculture. The receipts in the corresponding period of the previous year were 398,095 bales mainly of pressed cotton which were received at spinning mills and 4,837 bales were exported by sea while 215,029 bales were imported by sea mainly from Karachi and Bombay.

Cawnpore

Crisis in Cloth Market

THE smooth working of the distribution of cloth in the province has once again been disturbed. The entire cloth market remained closed for three days, as a protest against the new method of allocation fixed for Cawnpore by the Textile Commissioner—it was felt that a 13 per cent. allocation of the normal requirements was most irrational. For the past many months Cawnpore was virtually running short of clothing. It was demanded by the trade that the Provincial Government should take up the matter with the Government of India and ease the situation. Things came to a climax when the Textile Commissioner decided to allot 384 bales of cloth only per month. The dealers were further agitated because the allotted quota would be distributed only amongst the three big dealers of the city.

Earlier, high hopes were entertained and negotiations proceeded smoothly. Though the previous system of distribution had many loopholes, it worked well. It may be remembered that selected firms and nominees of the District Magistrates were the agencies entrusted with the task of distribution. Of course, it entailed some inconvenience to the public, inasmuch as the usual trade channels had no say in the matter. The present system virtually scraps the old arrangement.

Mr. Vellodi's Visit

Mr. A. D. Pandit, Civil Supplies Secretary to the U. P. Government, had prolonged discussions with Mr. M. K. Vellodi, the Textile Commissioner (who visited Cawnpore some time ago) and got his seal of approval for the new system. Mr. Vellodi when he was here had met both the dealers and the people, and as a result of firsthand studies had come to certain definite conclusions. The problem of associating the Kapra Committee with the distribution of cloth in the U.P. was also one of the problems prominently discussed during Mr. Vellodi's visit to this province.

Economic Conference

" The Fundamentals of Planning for the Economic Development of the Country " were dealt with by different delegates to the Fifth Session of the Indian Society of Agricultural Economics held here. Sir Manilal Nanavati, ex-Deputy Governor of the Reserve Bank of India, presided. Economists from different parts of the country attended. " The first fact to be borne in mind," observed the President in his speech, "while planning, was that India was essentially a rural country, and the rural population was composed of men of all grades of civilization from the primitive man to the highly efficient cultivator. Secondly, within each class or community there were people with special characteristics which reacted on economic development. Within the communities there were men of different castes, who were influenced by social customs and religious beliefs which led them on to unproductive expenditure keeping them under perpetual debts." Sir Manilal also stressed that " in any scheme of economic planning, the social environment should be taken into account. Therefore, planning in India should be on a sociological basis covering the whole man and every aspect of his life."

Medical Conference

The 21st session of the All-India Medical Conference was held recently in Cawnpore under the presidentship of Dr. Jivraj Mehta of Bombay. In his address Dr. Mehta dealt with problems such as the paucity of medical relief in the country, preventive measures, public health service, medical research, epidemic relief, Prof. Adarkar's Health Insurance Scheme, and other cognate problems connected with the medical profession.

REVIEWS

Beveridge Explained. By G. D. H. Cole. Published by Vora & Co., Publishers, Ltd., 3-4 Round Building, Bombay 2. Price Re. 1.

The above pamphlet is meant to explain the Beveridge Report to those who want its main proposals stated briefly and in unofficial language. It should enable the reader to quickly understand the report. It is an explanation and not a criticism; for though there are points at which the proposals are open to criticism they are all, according to Mr. Cole, only of secondary importance.

Identification of Fibres and Fabrics. Published by Research Bureau for Retail Training of the University of Pittsburgh, Pa., U.S.A., and the Fisher Scientific Company, Pittsburgh, Pa., U.S.A. Price: $0.80 each.

The Fisher Scientific Company has assembled a testing kit for the identification of textiles. This kit supplements the unaided senses by simple equipment for elementary physical and chemical tests, tests that can be easily applied by any untrained person almost anywhere. Though it is not meant to be a substitute for thorough scientific testing, it will provide accurate information in the majority of cases if handled correctly; in but few instances will it fail to disclose the desired facts. It should enable the expert to check on his initial impression of a fibre. The kit comprises a pocket outfit for identification of fibres and fabrics. The manual under notice, which is a part of the kit, explains the tests to be carried out by simple methods; in three additional chapters it summarizes other facts of importance.

Cottage Industries and their Role in National Economy. By Prof. Rao. Published by Vora & Co., Publishers, Ltd., Round Building, Bombay 2. Price: Re. 1.

The above small booklet embodies four talks given by the author from H.E.H. the Nizam's Broadcasting Station. He pleads for a well-co-ordinated and planned action for resuscitating village industries, which are of paramount importance to the village which in any scheme of economic planning must receive the primary consideration. Cottage industries, according to the author, are bound to solve the problem of unemployment. Examining the economies of cottage industries the author has succeeded in demonstrating their indispensability as a distinct system of production, and concludes with several valuable suggestions for reviving them and helping them to expand. In short, the author is convinced that India's industrial future depends on the resuscitation of cottage industries which alone can give increasing opportunities of employment to our starving millions. He quotes with approval Gandhiji's statement that the "problem in India is the devising of labour—absorbing and not labour-saving machinery."

The lectures are simple and lucid and there is much in them to provoke serious thought on a subject which is in the forefront of current public discussions.

NOTICES

Anatomy of Retted Jute (Indian Central Jute Committee, Calcutta, Agricultural Research Memoir, No. 2.). Price: Re. 1-0-0 or 1*s*. 6*d*.

Quality in jute depends upon the variety grown and the conditions under which the crop is raised and the fibre prepared. It is common experience that when fibre is kept in the steep too long, it becomes over-retted and loses tensile strength. Though the influence of retting on the quality of the fibre has long been recognized, little is known about the structural changes that take place during retting. Nandi and Basu (1938) have done some work in this direction, but from the short note published, it appears that they did not have an opportunity for studying the process in any detail. However, a considerable amount of work has been done on the retting process in flax, which has some bearing on the present study. Tadokora (1913) was one of the first workers in this field, but it was Davis (1923) who studied completely the structural changes associated with the retting of flax stems. Later, Anderson (1927) while making a microchemical study of the structure and development of flax fibres, carefully examined cross sections of retted flax stems at different stages.

For a proper understanding of retting, a detailed knowledge of the structural changes that take place in the stem during the process is very necessary. Therefore, an attempt has been made in this paper to bring out clearly the day-to-day changes in the anatomical structure of the jute stem during retting. The breakdown of the different tissues, which finally leads to the separation of the fibre bundles, has been followed stage by stage. The anatomical features, which interfere with uniform retting and give rise to inferior fibre, have also been studied.

Receipts at Mills in India of Raw Cotton Classified by Varieties, 1942-43 Season. I.C.C.C. Statistical Leaflet No. 3. Price 4 annas.

The above leaflet gives data showing the cotton received at mills in the year ending 31st

August 1943, classified according to trade descriptions and compiled from returns furnished by 92 per cent. of the total number of mills working in India.

The total mill receipts of Indian cotton during the season amounted to 4,230,000 bales (about 4,145,000 bales of 400 lbs. net), whilst the consumption for the season was 4,281,000 bales of 400 lbs. net. Out of the total receipts, the proportion of cotton "$\frac{7}{8}''$ and above" and "below $\frac{7}{8}''$" in staple constituted roughly 68 and 32 per cent. against 58 and 42 per cent. respectively in the previous season.

Distribution of Electricity, Vol. XVII, No. 155, is as usual full of highly instructive contributions, especially the sixth instalment in the series of articles on synthetic rubbers and plastics, contributed by Mr. William S. Perin of the Henley Research Laboratories; the latest instalment points out that, if all the possible cross-linkages between the molecular chains of bakelite could be formed, its tensile strength would be of the order of 4,000 kg./cm. sq., 500 times the strength at present attainable, which is approximately 5 tons/in. sq.

Family Employment: A Step towards Social Security. By H. P. Oza and V. B. Kotdavala. Published by Sandesh Prakashan Mandir, Saraswati Bhuvan, Sarangpur, Ahmedabad. Price: Re. 0-12-0.

This is a "proposal, presented as a basis for discussion, to accept for industrial labour the principle of employment as the family basis and to enable the workers to maintain a dynamic intercourse with their rural homes." In the words of the authors, it is a novel proposal seeking to allay a part of our economic troubles, and is highly interesting.

Bulletin of the Madras Presidency Electric Licensees' Association, Madras, Vol. 4, No. 2, makes it clear that electric licensees in several districts are being exercised by the current discussions on private enterprise *vs.* State ownership in the electricity industry. It is urged that in the Policy Committee of the Government of India room must be found for a representative of the private electric licensees who must be given credit for their pioneering efforts.

Marwari Chamber of Commerce, Calcutta. We have received a copy of the Report of the Committee of the Marwari Chamber of Commerce, Calcutta, for the year 1943 as well as for the period 1st January to 30th September 1944. Divided into convenient sections, the report deals with finance, trade and industry, piecegoods, public affairs and proceedings of the annual general meeting. An important commercial chamber, the Marwari Chamber has been playing a no mean part in moulding public opinion in commercial and economic matters.

We have received from the I.C.C.C Technological Laboratory copies of spinning test reports on samples of **Cambodia, Karunganni,** and **Bailhongal-Jayawant** as well as technological report on **Jayawant-Kumpta** cottons.

Labour Bulletin, Vol. III, No. 2, Quarterly Publication of the Labour Department, Government of the United Provinces, Cawnpore.

The *Labour Bulletin* is the only publication of its kind in the United Provinces disseminating statistical and other information of labour interest collected by this Department. As a monthly journal it was first started in January 1941, but since July 1942, with a view to effecting economy in the use of paper and to suiting all pockets, it is being published quarterly and is available from the Superintendent, Printing and Stationery, Allahabad on a nominal subscription of As. 4 per copy or Re. 1 annually.

There is an interesting article on the need for planning in the economic development of India in the December 1944 issue of **J. K. Review** published by the J. K. Group of industries in Cawnpore.

G.E.C. Journal, Vol. XIII, No. 2. Published by The General Electric Co., Ltd., Magnet House, Kingsway, London, England. The latest issue of this excellent house organ includes a concise and easily understandable review of the fundamental chemistry of plastics by a member of the G.E.C. Research Laboratories.

CALENDARS AND DIARIES FOR 1945

We have received a card calendar for 1945 from **West End Watch Co.,** Bombay, with the public holidays and holidays under charter parties listed on the reverse; a similar calendar has, as usual, been received from the **Bombay Chamber of Commerce,** Bombay.

We have received sheet calendars for 1945, with holidays marked in red, from **Sizing and Finishing Materials Co.,** 60-2, Dharamtalla Street, Calcutta, and the **India Waterproofing and Dyeing Works,** 60-2, Dharamtalla Street, Calcutta.

Messrs. Garlick & Co., Haines Road, Jacob Circle, Bombay, have sent us a copy of their latest wall calendar for 1945, with three months to a page, but each page carrying a different picture beautifully executed.

We have received a useful card calendar for 1945 from **Fleming, Birkby and Goodall, Ltd.,** (Bombay branch: **Card Clothing and Belting Ltd.**) with the holidays listed on the reverse.

We have received copies of good wall calendars for 1945, with the holidays marked in red, also from **General Electric Co. (India), Ltd., Industrial and Agricultural Engineering Co.** and **Insurance Services and Commercial Corporation, Ltd.,** Bombay.

M. Sharma & Co., Manufacturers of acids and chemicals for the textile industry, Gandhi Road, Ahmedabad, have kindly sent us a copy of their handy diary for 1945, with two days to a page. Some useful tables have also been given for the benefit of the public.

We have received, as usual, a pocket diary for 1945 from **Nowrosjee Wadia and Sons, Ltd.,** Neville House, Ballard Estate, Bombay. It contains much useful information on millwork and steam engine, textile machinery and cotton tables and should prove highly useful to mill men.

NEWS OF THE MONTH

Indian

Sit-down Strike at Apollo Mills.—About 500 workers belonging to a section of the employees of the Apollo Mills, Bombay, went on a sit-down strike on Tuesday, 19th December 1944. as a protest against the discharge of one of them.

Membership of the Textile Institute, Manchester.—Admitted recently to the ordinary membership of the Textile Institute, Manchester, were Mr. K. S. Amaria, Weaving Master, Lakhshmi Cotton Manufacturing Co., Ltd., Sholapur, and Mr. R. N. Srivastava, Lecturer in Textiles, Delhi Polytechnic, Delhi.

Shortage of Coal Affects Cotton Mills.—Owing to acute shortage of coal the cotton mill industry in Ahmedabad, Indore, Baroda, Broach and Sholapur has been thrown out of gear and several mills have been forced to close down in those localities. Several thousands of workers have thus been rendered idle.

Bombay Working Class Cost of Living Index.—During November the working class cost of living index number for Bombay, with the average prices for the year ended June, 1934, equal to 100, was 242. This was three points higher than in the preceding month. The index number for food articles advanced by six points to 277.

Industrial Disputes.—During October, 1944, there were 23 industrial disputes in Bombay Province. Fifteen were in Bombay, four at Ahmedabad and one each at Poona, Mundhawa (Poona District), Jambul (Kalyan Taluka, Thana District) and Bandra (Bombay Suburban District). The number of work-people involved in these disputes was 18,249 and the number of working days lost was 27,073.

Madras Labour Demands Inquiry on 12-loom System.—A resolution requesting the Government of Madras to set up a Board of Inquiry, consisting partly of experts, to go into the difficulties caused by the working of the 12-loom system in the Buckingham and Carnatic Mills, was adopted at a general body meeting of the Madras Labour Union held recently. Mr. V. Chakkarai Chettiar, President of the Union, presided.

Textile Calendar

DECEMBER

21st, Thursday :

First All-India Cotton Forecast Estimates for 1944-45 season.

30th Saturday :

Indian Economic Conference Inaugurated in New Delhi by Sir Ardeshir Dalal, Kt.

Marwari Chamber of Commerce, Bombay, Annual Meeting.

JANUARY 1945

5th Friday :

Third Quarterly General Meeting of the Indian Chamber of Commerce, Calcutta.

14th, Sunday :

The Textile Association (India) Public Lecture by Mr. B. B. Joshi, L.T.M. (Hons.), Additional Controller of Raw Materials and Stores, on the "Implications of the Platt Report," Podar College of Commerce, Bombay.

19th, Friday :

Safety First Association of India, Bombay, 12th Annual General Meeting, Electric House, Colaba, Bombay.

21st, Sunday :

21st Session of the All-India Trade Union Congress, Madras.

FEBRUARY

27th & 28th :

Second All-India Textile Conference, Bombay.

MARCH

1st Thursday :

Second All-India Textile Conference, Bombay.

Drop in Acreage under Indian Cotton.—A sharp drop of 24 per cent. in the acreage under Indian cotton during the current cotton season is estimated by the Director-General of Commercial Intelligence and Statistics, Calcutta. The first forecast places the area under cotton at 11,560,000 acres divided into Bengals

1,469,000 acres, Americans 3,129,000 acres, Oomras 3,737,000 acres and other varieties 3,225,000 acres.

Colour Merchants' Association Annual Meeting.—The following members were elected office-bearers of the Bombay Colour and Chemical Merchants' Association at its annual meeting on 16th December 1944. Mr. Ranchhoddas K. Rangwala, (President), Mr. Nariman M. Dadachanji and Mr. C. D. Mehta, (Vice-Presidents), Mr. Muljibhai Somabhai and Mr. G. M. Desai, (Secretaries) and Mr. Kantilal N. Shah and Mr. Narsidas D. Saiah (Treasurers).

Labour Member's Discussion with Engineers.—Dr. B. R. Ambedkar, Labour Member of the Government of India, discussed with the Committee of the Engineering Association of India on 4th instant labour welfare schemes in relation to industrial development.

The question of housing industrial labour, establishment of a Labour Academy for the training of trade union officials and the formation of wages boards were also discussed.

Regulating Purchase and Sale of Cotton in Chalisgaon.—The Government of Bombay has declared its intention of regulating the purchase and sale of cotton (ginned and unginned) and groundnut (shelled and unshelled) in the area of Chalisgaon Taluka in the East Khandesh District, excluding 33 villages lying beyond the Girna River.

Any objection or suggestion which may be received by the Secretary to the Government of Bombay, Revenue Department, will be considered by the Government.

Electrification of Sind: Government's Plans.—A two-crore programme for electrification of every town in the province after the war is being worked out by the Sind Reconstruction Department.

Under the programme, three generating plants will be set up in upper, lower and central Sind respectively, run by hydraulic energy from the Tando Mastikhan Falls near Sukkur. The total output of the system is expected to be about 25,000 kilowatts. Industrial concerns in the province will get a fillip by this system.

New Names for the India United Mills Group.—The five mills and the Dye Works owned by the India United Mills, Limited, Bombay, viz., the Jacob Sassoon Mills, the Alexandra Mills, E. D. Sassoon Mills, the Rachel Sassoon Mills, Manchester Mills and The E. D. Sassoon Turkey Red Dye Works will, with effect from 1st January, 1945, be known as the India United Mills, Ltd., No. 1 Mill; the India United Mills, Ltd. No. 2 Mill; the India United Mills, Ltd. No. 3 Mill; the India United Mills, Ltd. No. 4 Mill; the India United Mills, Ltd. No. 5 Mill and The India United Mills, Ltd. Dye Works, respectively.

Bombay Textile Workers' Meeting.—A meeting of textile workers was held on the 1st instant at Parel, Bombay, with Mr. B. T. Randive in the chair. He urged that the cuts in the " piece rates " imposed in some mills should be restored. He added that one of the mills, which was indefinitely closed, should be immediately opened, and if the owners were not inclined to do so, the Government should take over the management in the interests of the workers and consumers. If the demands of the workers were not to be granted straightaway, he said, they might at least be referred to adjudication. Mr. S. G. Patkar and Mr. R. K. Bhogle also addressed the workers.

Indian Trade with South America.—Considerable interest in trading with India was encountered by the Indian Trade Commissioner, Mr. J. R. K. Modi, who has just returned to Buenos Aires from a four months' trip to Chile, Peru, Ecuador, Colombia and Brazil. Jute and jute manufactures elicited interest in all the countries he visited.

Other Indian products found of general interest were spices, oilseeds, medicinal herbs, Indian silk, both yarn and manufactured wool, certain qualities of leather and small bazaar wares formerly exported by Japan such as household hardware, crockery, glassware, etc. Inquiries were also received regarding the possibilities of the export of chemicals.

India a Big Market for Woollens.—India is envisaged by the International Wool Publicity and Research Secretariat as a great potential market for woollen textiles. A conference of its executive, attended by delegates from South Africa, Australia and New Zealand, has now concluded its work and the secretariat issued a statement reviewing some of its work during the past fortnight at a Press conference in London.

The delegates gave the assurance that they were resolved to maintain the position of wool as No. 1 textile in the world.

The report stated that " the conference devoted much attention to the needs of vast prospective markets such as India, Russia and China, and decided to set up a special section of the secretariat to deal with the particular problem of newly developed countries.

Mr. Douglas Boyd, Chairman of the Australian Wool Board and Chairman of the executive of the secretariat, explained that India, with her huge overseas credit, was a great potential market for wool textiles and the market would no doubt increase after the war with the raising of the standard of living in that country. Hence her economic possibilities would be fully surveyed.

Provincial Industries Committee, C.P. and Berar.—An exhaustive questionnaire has been issued by the Provincial Industries Committee separately to individual establishments in C.P. and Berar, but as time is short industrialists, capitalists, *entrepreneurs* and others interested in the industrialization of the Province have been requested to send in their replies at an early date. The Committee will deal, among other subjects, with the following:

Textiles.—Textile mills, power-looms, ginning and pressing of cotton, silk and sericulture, hosiery, manufacture of textile machinery, examination of existing types with reference to types of cotton, other fibres such as sunn-hemp, linseed stalk fibre, wool, rayon requirements for industry, coir, rope and cordage, power belting.

Minor and cottage industries.—Co-operative industrial establishments, decentralization of industries involving processing of agricultural produce, village workshops, power-loom establishment in villages, hand-looms, weaving, supply of yarn from textile mills to handlooms and to village units of power-looms, subsidiary industries, manufacture of components of major industries, laboratories and workshops for designing new machines for use in cottage industries.

Training of skilled personnel and research.

Sheep Breeding in the Deccan: Bombay Governor Visits Bhamburda Farm.—The Sheep Breeding Farm at Bhamburda, near Poona, has developed a fine flock of sheep with soft, snow-white coats of fleece. The sheep indigenous to the Deccan carry black hairy fleece, but the evolution has been made possible by cross-breeding the Deccan sheep with the pure bred Merino from Africa.

Keen interest in the excellent work of the farm was evinced by the Governor of Bombay when he visited it, accompanied by Lady Colville and Miss Colville. The farm supplies to the rural parts of the province pedigree rams for sheep improvement work. His Excellency remarked that the farm was doing valuable work, which would have to be extended in post-war years.

Subsidized by the Imperial Council of Agricultural Research, the farm was started in 1937 with the object of improving the Deccan breed of sheep by homogeneous cross-breeding. Attached to the farm is a wool analysis laboratory and a small weaving and spinning establishment for research in the utilization of wool in village industry.

His Excellency and Lady Colville expressed themselves pleased with the various types of woollen cloth manufactured in the spinning and weaving establishment of the farm. They were received at the farm by Mr. W. J. Jenkins, Director of Agriculture, who presented to the Governor Mr. D. B. Kolhe, Live-Stock Expert to the Government of Bombay, Mr. B. B. Jamarjinnah, assistant to the Live-Stock Expert and Mr. S. S. Khot, who is in charge of the farm.

Technological Institute : Surat Plan.—A scheme for the establishment of an institute of higher technology at Surat at a cost of Rs. 10,00,000 was presented to Mr. I. H. Taunton, Adviser to the Governor of Bombay, at a meeting of the Managing Committee of the Surat Chamber of Commerce on 26th December 1944. The proposal is to impart instruction in courses up to the diploma standard, including certificate and tradesman courses in mechanical, electrical and automobile engineering. Textile, dyeing and printing, carpentry and wood-carving and hand-made paper-making are included in the certificate course.

Presenting the scheme, Rao Saheb V. C. Jadhav, President of the Chamber, said that the city housed a number of small-scale industries, including a major part of the handloom and jari industry of the country. These industries required little capital but great technical skill. There were small plants for dyeing and printing and small factories for the manufacture of almost all machinery required for the big jari industry. But this was not enough. The city's jari products and cotton piecegoods had an extensive market, not only in this country, but also abroad, and if these industries were to hold their own against foreign competition, they must be technically overhauled. This required a constant supply of technical personnel with up-to-date information and training.

Mr. Taunton, in his reply, pointed out that the framers of the scheme expected the whole cost to be borne by the Government. While the Government would gladly help any technological scheme, part of the scheme at least should be financed by local funds.

Unemployment due to Coal Shortage: Government's Relief Scheme.—The Government of India have, it is understood, formulated proposals in accordance with the recommendation of the tripartite conference, for giving relief to workers temporarily thrown out of employment owing to the shortage of coal and similar reasons. These proposals relate only to short-term unemployment during the period of war due to the shortage of coal or raw materials or changes in lines of production, of which adequate notice cannot be given.

The proposals do not cover closures of factories or of departments due to special Government orders or closures of which adequate notice is given under standing orders, whether statutory or voluntary. Benefit, which should be on a scale lower than the ordinary rate of pay, is suggested to be fixed in either of the following two ways:

One, 75 per cent. of the ordinary rate of pay for the first fortnight of unemployment and 50 per cent. of the ordinary rate of pay for the second fortnight of unemployment with possibly a flat rate of benefit for persons drawing lower levels of incomes. Two, a flat rate which would be about 75 per cent. of the average of lower range of wage rate in the undertaking.

The duration of the benefit is suggested to be one month, allowing for a waiting period of seven days. The cost of the benefits will be admitted as revenue expenditure for income-tax and E.P.T. purposes.

The Government of India have forwarded these proposals to the Provincial Governments and the States, and, while circulating them to the Employers and Labour Associations, the Government of Bombay suggest that, where a stoppage has occurred and relief is not given, a demand for relief would be a fit subject for adjudication.

Institute of Textile Technology, University of Travancore.—The following amendments with regard to the scheme of examinations in Textile Manufacture and Textile Chemistry Diploma course have been made by the Travancore University:–

The course shall extend over three academic years. Candidates shall be required to specialize in one of the two branches, textile manufacture or textile chemistry, during the third year of the course, and diplomas in the branch in which they have specialized will be awarded to successful candidates.

Candidates for the diplomas shall be required to have passed the following University examinations:—

(i) Diploma Examination in Textile Technology, Part I, held at the end of the second year. (This examination shall be common to students of textile manufacture and textile chemistry.)

(ii) Diploma Examination in Textile Technology, Part II held at the end of the third year.

Note.—There will be an examination conducted by the Institute at the end of the 1st year in the following subjects:—Mathematics, physics, chemistry, drawing (free hand and machine), textile chemistry, spinning and weaving, bleaching and dyeing. Sessional work in the above subjects is also valued and marks awarded.

Three-tenths of the aggregate marks obtained by the candidate at the end of the first year (i.e., institute examination plus marks for sessional work) are carried forward to the second year. Five-tenths of the marks for the second year (i.e., university examination marks plus marks for sessional work plus the carry-over from the first year) are carried forward to the third year. The whole of the three years' work in this way will ultimately count in the award of the diploma.

Foreign

Indian Scientists Visit the Shirley Institute.—A party of distinguished Indian scientists who are making a tour of England have visited the Shirley Institute of the British Cotton Industry Research Association. The Principal (Dr. F. C. Toy) explained the scope of the work and its liaisons with the cotton industry.

Training Centres for Textile Industry : British Government's Proposals.—Mr. Bevin, Minister for Labour, England, told the Press that it was proposed to establish one or more Government Training Centres for the cotton industry which would be regarded as models for those to be established by the industry itself. 175,000 operatives had left the industry since the war and the difficulties of meeting post-war personnel requirements were enormous, he said.

India's Industries : Britain's Helpful Attitude.—Speaking at a meeting of the East India Association held at the Caxton Hall, Westminster, England, on 19th October 1944, Mr. L. S. Amery, Secretary of State for India, said: "I can say that the Government of this country only wants to see Indian industry developing to the fullest. The last thing industrialists of this country have in mind is the idea that the British export industry can best prosper by India being held back in the course of her industrial development."

Canada Asks for Lancashire Textiles.—The Canadian Government has asked for 25,000,000 yards of cloth from Lancashire to make good her own insufficient production for essential domestic requirements. Canadian representatives met the Cotton Board and Cotton Control in Manchester recently and stressed that in clothing and equipping their armed forces the Canadian textile industry was unable to meet pressing civilian needs. Special efforts are to be made to meet the request. Canada is also pressing for the lifting of the ban on the import of British textile machinery imposed under Lease-Lend.

Indo-Australian Trade.—India has asked Australia, through the Eastern Group Supply Council, to supply 1,200 ship anchors and 1,057,000 tubes of catgut, and Australia has contracted to manufacture and supply both. The estimated cost of the anchors is £17,500 and catgut £30,000. Recently Australia accepted an Indian order of 200 tons of sulphaguanidine used to prevent and cure dysentery among troops in Burma and for the civilian population of India. Australia is now purchasing from India hundreds of thousands of tons of supplies covering large quantities of textiles and cottons and made-up garments in addition to very important jute and hessian supplies.

School of Industrial and Labour Relations in U.S.A.—A School of Industrial and Labour Relations has been started at Cornell, the State University of New York, states the *Labour Information Bulletin*, Washington.

The purpose of the school, as outlined in the Act creating it, is the teaching of the history of industrial practices of employers and employees, the history and principles of sound industrial relations, the rights and obligations of employers and employees, the development of labour law, and all other phases of employer-employee relations tending to promote the public interest. The school is a part of the State Education Department and as such is open to anyone who is interested in the general field of industrial relations, whether from the management, worker, or public angle.

Textile Industry in Brazil.—The *Brazil News* issued by the Brazilian Consulate in Liverpool states that cotton textiles occupied third place in the exports for February with an amount totalling 8 per cent. of the whole. Naturally Argentina was the best outlet for these goods, taking nearly 62¼ per cent. of the total textile export, but Uruguay was also a notable customer, although her purchases, as well as those of Bolivia, Chile, and Paraguay, were on a smaller scale. Ireland bought representative parcels of every type of cotton textiles exported by Brazil for the purpose, apparently, of testing the possibilities of Brazil as a supplier. However, exports of cotton goods in the first two months of the year to the Union of South Africa were very small in contrast with previous years when South Africa was a big market. There was also a bigger export of raw cotton, the amount representing 12 per cent. of the entire export. Of this nearly 95 per cent. went to Great Britain, while Spain took virtually all the remainder.

Closed British Cotton Mills : Reopening Urged.—The British Cotton Board has recommended that the Board of Trade should fix a date as early as possible, having regard to the labour situation, for the reopening of all cotton spinning mills closed under the concentration scheme on the understanding that care and maintenance payments by the nucleus mills under the proposed legal agreement are allowed as expenses for taxation purposes.

The committee representing the nucleus and closed mills declares: "We are entirely opposed to the method of reopening by any form of selection as between one mill and another except in a few isolated cases. Shortage of labour, says the committee, will be one of the major problems to be solved, and vigorous action by the Government and trade organizations will be necessary to make it good. It is not expected that there will be a sufficient number of operatives to permit the reopening of the closed mills on a considerable scale before the end of the war in Europe."

Platt Report in the House of Commons.—Reference to the report on the British cotton industry as compared with that in the United States was made in the Commons on 6th December 1944 during a debate on exports.

Mr. Hammersley (Conservative) said: "Don't take this black report at its face value." It dealt, he said, largely with the production of standard lines, whereas Britain's future export trade must depend on quality and variety.

The report shows that Lancashire used cheaper cotton than America and produced better yarns. The quality in Lancashire was better and machine productions in Lancashire were greater.

Moreover, the report shows that in the treatment of cotton itself Lancashire had little to learn. It was relevant, however, in the view of the report, to ask the Government what steps were being taken to see that standard lines were organized in the industry. He suggested that individual firms in particular sections of the industry should co-operate for large-scale experimental re-equipment.

Mr. Bowles (Labour) said that after machines had been sold abroad they were used by Britain's competitors in the Far East to build up the trade against Britain at rates she could not compete with, in view of the very low wages paid.

Mr. Dalton said if British industries were not as efficient as in America and elsewhere, then the long-term prospects for British exports would be pretty poor. A great deal depended on the technical British industry in the future.

Fifty Years Ago

(From the *Indian Textile Journal*, January 1895)

New Machinery Showrooms in Bombay

"A welcome sign of the times is the opening of showrooms for machinery in Bombay. This movement was led on a large scale last year by Mr. Ralph Douse, with a very well-lighted and handsome showroom in Apollo Street, containing portable and fixed engines, machines, tools, and other appliances. There will be shortly opened showrooms and stores by Messrs. Macbeth Bros. & Co. in Clare Road and Messrs. John Hetherington and Sons are also preparing showrooms for displaying their numerous manufactures, and it is not unlikely that others may follow the example which has stimulated business so much in other cities. The favourable prospects of trade in machinery and millwork have been foreseen by the more enterprising firms and the number of cold-weather tourists representing manufacturers justifies the expectation of good business during the year."

The Indian Textile Journal

INCORPORATING:— INDIAN IMPORT & EXPORT TRADES JOURNAL—INDIAN INDUSTRIES & POWE

Founded by SORABJI M. RUTNAGUR

55th Year

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REPRESENTATIVES IN GREAT BRITAIN

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EDITORIAL

The Bombay Plan: Part Two

EXACTLY a year ago we commented in these pages on the first part of a 15-year plan for the economic development of India, drawn up by Sir Purshotamdas Thakurdas, Sir Ardeshir Dalal, Sir Shri Ram, Mr. J. R. D. Tata, Mr. Kasturbhai Lalbhai, Mr. G. D. Birla, Mr. A. D. Shroff and Dr. John Matthai. While the first part dealt with the problem of increasing national production, the second part, released last month, tackles the questions of distribution and the role of the State. It is signed by all of the original signatories except Sir Ardeshir Dalal, who has since joined the Government of India as Member for Planning and Development. But Sir Ardeshir had been closely associated with the drawing up of this part also before he took up office, and he has declared that the aims of the Bombay planners and the Government of India are the same, viz., raising the standard of living of the average man; we can also trace a certain similarity of thought between the second part of the Bombay plan and the second report of the Reconstruction Committee of the Viceroy's Executive Council.

Improvement in the standard of living of the masses being the object of all planning, it involves both increased production and equitable distribution. Equitable distribution will secure to every person a minimum income essential for a reasonable standard of living—a basic minimum allowing for variations in income according to ability and productivity—, and it will prevent or reduce gross inequalities in the incomes of the different classes and individuals. Two classes of measures are necessary to secure a minimum standard of living: raising the general level of income and reducing the cost of living. It is proposed to raise the general level of income by the provision of full employment, increase in efficiency, and improvement in wages. Providing full employment means "ensuring for every person suitable opportunities for earning his or her livelihood." In order to achieve this, a smaller measure of capital per worker than elsewhere has been suggested, as well as the fullest possible development of small-scale and cottage industries. Similarly, the provision of work for seasonal unemployment in agriculture being of great importance, the Bombay plan recommends the provision of subsidiary industries like spinning and weaving which the cultivator can take up when he has no work on the farm. It proposes to bring about increased all-round efficiency by the spread of general and technical education among the workers. Small-scale and cottage industries will be better organized, and cheap electricity and improved tools will be made available to them. Under a system of decentralized production the benefits of higher efficiency will go to the small-scale producer, who will be assured of a corresponding increase in his income. As to raising the general level of wages, the plan realizes that the establishment of a basic minimum wage for all occupations is out of the question, but that a beginning may be made in certain well-established industries like cotton textiles, sugar and cement. It is laid down that in the beginning the minimum below which wages should not be allowed to fall should be related to the normal wage-level prevailing in the industry, and that the minimum should be revised from time to time, until it corresponds with a reasonable standard of living, by standing committees composed of representatives of employers, workers, and a few independent persons.

While the suggestions made so far are calculated to increase the incomes of those below the subsistence level, the proposals put forward for reducing the cost of living fall under two different categories, viz., the provision of free social services like medical treatment and education, and the provision, at low cost, of essential utility services like electricity and transport. In order that their cost to the consumer might be as low as possible and within the means of the bulk of the population, they will be subsidized to the necessary extent by the State. To provide for unforeseen causes like monsoon failures, however, a national relief fund will be started and utilized at need. These, it is admitted, do not, of course, provide a complete scheme of social security. They do not touch contingencies such as sickness, old age and technological unemployment, which can be met only by a comprehensive scheme of social insurance which the plan rules out "until a policy of full employment has had time to work itself out and some approximation is made to a position of stable employment for the greater part of the population and until the average individual income has risen sufficiently to meet the contributions necessary under a scheme of social insurance." It is suggested, however, that, as in the case of minimum wages, a beginning may be made in the direction of social insurance by introducing sickness insurance and holidays with pay for workers in organized industries.

Attempts to ensure a minimum standard of living to everybody will incidentally bring in its wake a certain reduction in the inequalities of income of the different classes and individuals. But more positive steps, the plan recognizes, are called for. A wider distribution of the shares of joint-stock companies, development of the co-operative movement and regulation of interest rates and profits are indicated. It is also recognized that the most effective method of preventing gross inequalities is direct taxation, which is necessary if India is to meet the increased costs of administration arising from planning, the cost of social services like education and medical treatment and of subsidies for essential utility services. Most important of all is the provision for State control, accompanied in suitable cases by ownership or management, of public utilities, basic industries, monopolies, industries using or producing scarce natural resources and industries receiving State aid. Control, it is said, may be in the form of fixation of prices, limitation of dividends, laying down conditions of work and wages for labour, nomination of Government directors, and licensing. In the case of enterprises important to public welfare or security which are owned by the State, public interest will be the only consideration governing the issue whether State-ownership and control should also be augmented by State management.

It will be evident, therefore, that the continuation, and in some directions the more rigorous enforcement, of controls that is implicit in any scheme of economic planning will necessitate the enlargement of the positive and preventive functions of the State in the economic sphere. It is also taken for granted that the various controls will not be effective unless the State, which is the central directing authority, has a specialized agency for handling economic matters, and this agency is to be supplied by an Economic Civil Service composed of persons with the appropriate education, training and experience. Having gone so far, the plan clearly defines the nature of the central directing authority, the regional distribution of economic activities and the system of society in which those activities are to be pursued. Both the plan and the proposals for meeting its cost imply the existence of a responsible national Government as an essential condition. Any programme of economic development, moreover, should include the whole of India, British as well as Indian, and progress should be so planned that the targets as well as the pace fixed for the plan should have uniform application throughout the country; otherwise a proper regional distribution of industrial activities will become impossible. As to the system of society considered desirable for carrying through its recommendations, the plan envisages a combination of the principles associated with both capitalism and socialism because "capitalism, in so far as it affords a scope for individual enterprise and the exercise of individual initiative, has a very important contribution to make to the economic development of India."

The first part of the Bombay plan received a good Press if for no other reason than that it really set the ball rolling; the second and concluding part has been received even more enthusiastically, because the framers of the plan, pre-eminent captains of industry as they are, have squarely faced the vexed problems of distribution, of Capitalism *vs.* Socialism, and of State control *vs.* private enterprise. It augurs well for the future that the Government of India have already made a beginning with respect to some of the proposals contained in the plan, for the fact that a national Government is necessary for putting into effect all its proposals can be no reason for remaining idle.

Towards Stabilisation...

Since January 1941 prices of commodities in the textile trade, such as cotton, mill-stores, wages, grain and cloth, began to rise at an abnormal rate, reaching the peak level some time in March 1943. The control measures undertaken by the Government of India in conjunction with the Textile Control Board then began to have a restraining effect and gradual reduction has since taken place. As will be seen from the graph opposite, the curves are now tending to run together, indicating that relative price stability is slowly being reached.

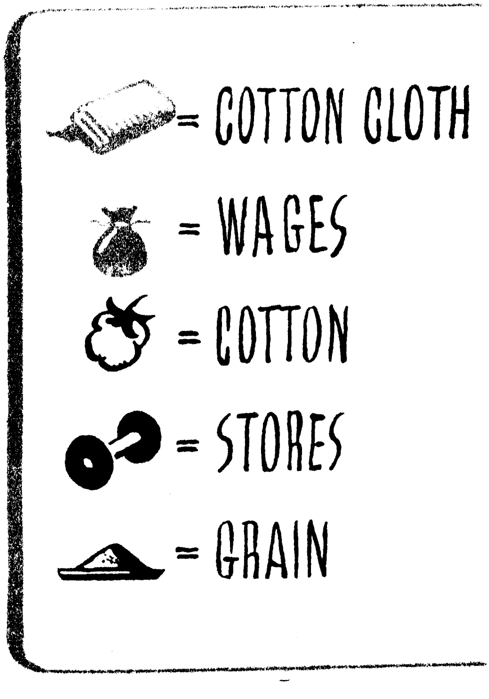
THE graph shows the variations in the cost of mill-stores, wages and cotton to all mills, and of cloth and grain to the consumer, taking as the basis the rates ruling in January-February-March 1941 as 100. Thus 200 on the vertical scale represents a rise of 100 per cent., 300, a rise of 200 per cent. and so on.

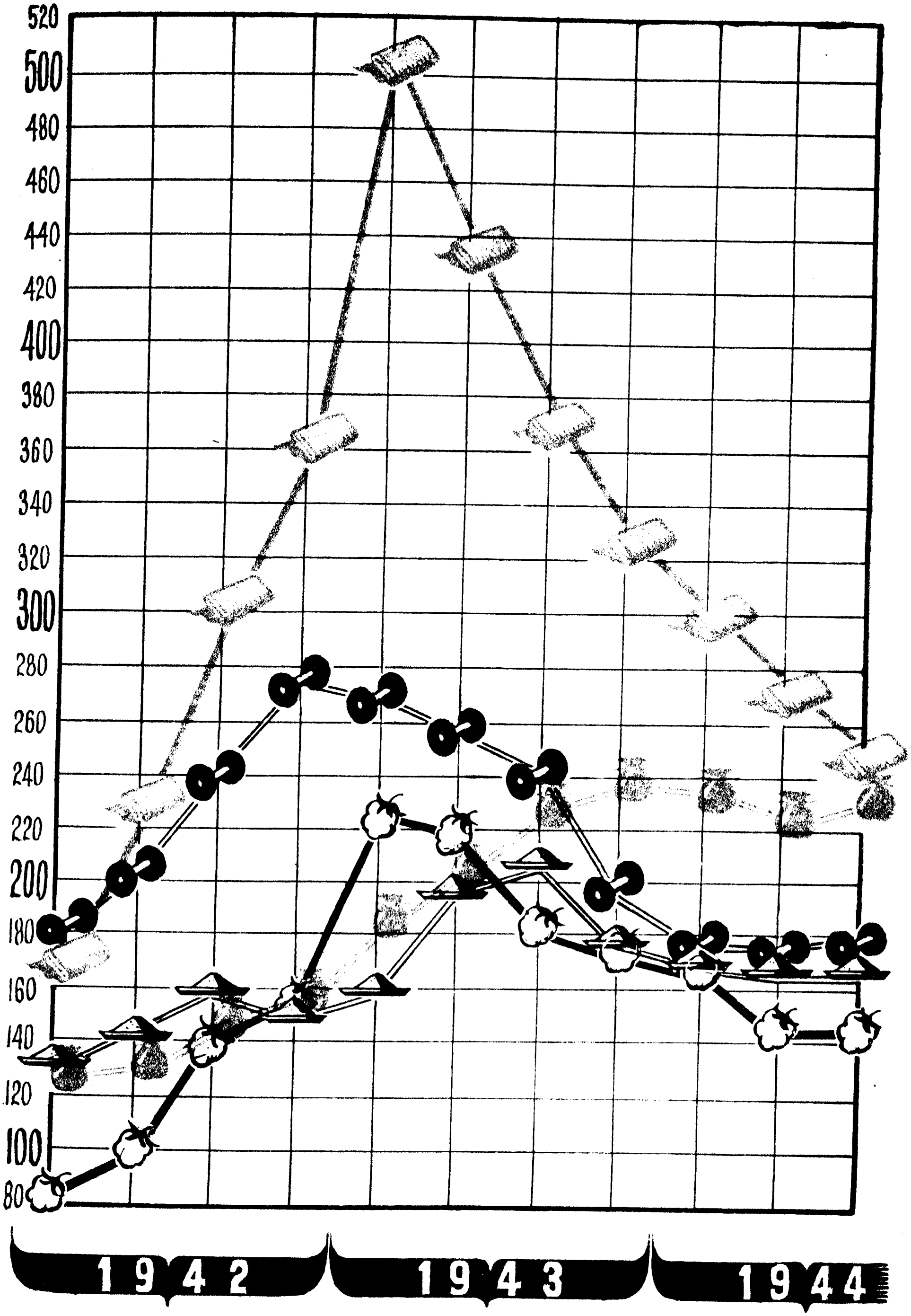
The cloth curve is based on the current market rate for a typical leopard cloth, the wages curve has been taken from several sources while the cotton curve is based on the price of a typical mill mixing. The stores curve refers to mill-stores and is based on representative figures obtained from reliable sources. As regards the grain curve, the price of rice in Bombay City published in the *Bombay Labour Gazette* has been taken as the basis.

It will be noticed that the graph clearly reflects the effects of the various price control measures taken by Government. Whereas the cost of mill-stores had risen before control by 175 per cent. over the basic cost, it fell to 80 per cent. above the basic cost in the quarter August-September-October 1944. Similarly, before the introduction of control, the costs of raw cotton and cotton cloth had risen by 125 per cent. and 400 per cent. respectively, over the basic costs. But in the quarter August-September-October 1944 they marked a rise of only 45 per cent. and 145 per cent. respectively over the basic cost.

In the basic quarter, January-February-March 1941, when the cost of the several items is taken as 100, it is estimated that mill-stores cost about Rs. 3 crores: raw cotton about Rs. 19 crores and cotton cloth about Rs. 18 crores. In the quarter immediately preceding the introduction of control over mill-stores, their cost had gone up to about Rs. 8 crores but is believed to have fallen to a little over Rs. 5 crores in the quarter August-September-October 1944. Similarly, in the quarter immediately preceding the introduction of control over raw cotton and cotton cloth, their costs had reached the peak levels of roughly Rs. 43 crores and Rs. 89 crores, respectively. In the quarter, August-September-October 1944, however, these figures are believed to have come down to Rs. 27 crores and Rs. 44 crores respectively.

While it is not claimed that black markets in cloth and yarn have disappeared as a result of the control measures, it is clear that considerable improvement in the situation has taken place since the introduction of control.





The vertical scale indicates the percentage variations in the cost of the different items. The horizontal scale indicates the different quarters of the year, commencing from February-March-April 1942 and ending with August-September-October 1944.

Hand Spinning in the Madras Presidency

BY V. G. RAMAKRISHNA AIYER, M.A., L.T.

(Specially Contributed)

IN almost all the districts of the province of Madras, hand spinning is still carried on as a subsidiary occupation. The agriculturists prefer to clothe themselves in rough and coarse garments made of cotton grown in their fields and there is a demand for hand-spun yarn for making clothes. The industry has been carried on in certain places from time immemorial as a hereditary occupation, in which case it is almost always followed as a subsidiary occupation, and in other places it owes its existence to the activities of the All-India Spinners' Association and *khaddar* propagandists where, of course, the occupation is generally whole time.

The industry as at present carried on does not, owing to several causes, pay the worker adequately for the labour and trouble involved and at the utmost the earnings of a spinner do not exceed two annas per diem at the most favourable estimate. The yarn produced is, except in very rare cases, very coarse and uneven. The disadvantages to the weaver using it are its comparative high price in relation to the price of mill-made yarn, intermittent supplies owing to the carrying on of the industry in scattered localities and, last but not least, its poor quality, causing the weaver losses and troubles and necessitating occasional stoppages of the operation of the loom. The use of the spinning wheel is easily and quickly learnt but the ability to make good, even, yarn without weak patches or unsightly enlargements at intervals, or to spin for warp or weft as may be required, can be attained only after long and arduous practice. There seems little doubt that from the point of view of economic production the use of machine-made yarn has nearly everything to recommend it, as it is cheaper and more easily obtained and further better adapted, being stronger and more useful for use on looms. There might be a case for the weavers to strike a via media course by adopting mill yarn for warp and hand-spun yarn for weft as, if proper care is exercised, there should not be any considerable shrinking.

Imperfections of the "Charka"

The difficulty in regard to hand-spun yarn is largely due to the imperfections of the spinning wheel. The *charka*, besides throwing a good amount of work on the spinner, has the following among other disadvantages:—(1) Intermittent twisting and winding, (2) necessity for the use of both hands, (3) smallness of output, (4) it attempts only one out of the several operations in the process of transformation of cotton into yarn and there is no simultaneous arrangement for carding, drawing, etc., (5) the yarn (cotton) spun on the *charka* does not always easily stand the strain of fly-shuttle looms.

The spinning wheel was originally used in Europe for spinning flax, hemp and other hard fibres of a longer staple and after cotton also began to be spun on it, the improvements on the *charka* were mainly stimulated by the larger demand for stronger yarn that would stand the strain of the fly-shuttle loom invented by Mr. Kay. This will show that the future of hand spinning is largely dependent on the extent to which fly-shuttle slays are in use in the country. The scope for the utilization of hand-spun yarn gets diminished with the increasing use of fly-shuttle slays by the weaving community.

Even the so-called improved *charkas* are not really improvements over the ordinary spinning wheel and they do not even give greater outturn, although the cost involved is higher and the irregularity is at least as great. Whatever may be the result of the endeavours to evolve an improved *charka*, those who are interested in the industry should not overlook the problem of evolving a machine for preparing uniform and good slivers. If such a machine could be evolved, it would help the industry considerably.

Hand-spun yarn, besides being weak, is also more costly than mill yarn and the weaver's preference for mill yarn is mainly decided by this factor. The weaver usually demands a higher wage for weaving hand-spun yarn and gets it too. It is true that such of the weavers as have taken to *khaddar* weaving are, besides getting higher wages, more regularly employed than those depending on mill yarn, but this circumstance is largely attributable to the limited number of weavers taking to the weaving of hand-spun yarn and also to the fact that they are usually engaged by organized associations.

We may now compare the prices of mill yarn and hand-spun yarn of two different counts in a normal year in this province.

For 10*s*.

	Rs.	a.	p.
4 viss of unginned cotton costs	1	8	0
Ginning charges	0	3	6
	1	11	6
Deduct cost of seed separated from 3 viss	0	6	0
	1	5	6
Charges for carding and sliver making for 1 viss or 3 lbs.	0	3	0
	1	8	6
Loss in carding	0	1	0
	1	9	6
Charges for spinning, Re. 1 per viss	1	0	0
Cost of yarn 1 viss or 3 lbs.	2	9	6
Cost of yarn, 1 lb.	0	14	0
Cost of yarn, 10 lbs.	8	12	0

The cost of mill-made yarn 12s is about Rs. 6-4-0 to Rs. 6-8-0.

For 40*s*.

(Forty hanks make 1 lb. if the yarn be 40s.)

	Rs.	a.	p.
Cost of cotton 1⅛ lb. including wastage	0	12	0
Coolie for spinning	2	8	0
	3	4	0
Value of 10 lbs. of hand-spun yarn	32	8	0
But mill-made yarn of 10 lbs. costs	11	2	0
Difference in price	21	6	0

In Tiruppur, which is one of the principal centres of hand-spinning, the Khaddar Stores pay Re. 1 per lb. of yarn of 8s to 12s on the following basis:

	Rs.	a.	p.
Cost of 1 lb. of ginned cotton	0	10	0
Wages for spinning	0	5	0
Commission for the collecting agent	0	0	9
Wastage	0	0	3
Total	1	0	0

The following statement shows the difference in the prices of mill and hand-spun yarn:

Count of yarn	Price of hand-spun yarn	Price of mill-spun yarn.
10s to 12s	Annas 13 to 14	As 8 to 10.
20s	Rs. 1-8-0	Less than Re. 1
30s	Rs. 1-14-0	Less than Rs. 1-2-0

If we compare the prices of cloths made in a mill with those made by a weaver out of hand-spun yarn the following statement would indicate the difference between the two:—

Cost of manufacture of a lb.

Mill cloth	Pies.
Coal	10.09
Stores	14.46
Labour	39.69
Office and supervision	3.41
Fire insurance	1.67
Municipal and other taxes	1.57
Interest	5.66
Commission on cloth	4.60
Agent's commission	0.83
Income-tax and super-tax	1.04
Total	83.92
	i.e., Annas 7.

Hand-made cloth.	Rs.	a.	p.
Carder's wage	0	1	0
Spinner's wage	0	3	0
Weaver's wage	0	7	6
Depreciation in materials	0	0	6
Total	0	12	0

The foregoing statistics of production show that the production of hand-spun yarn and cloths from such yarn is decidedly costlier and this fact is even admitted by *khaddar* enthusiasts.

Economics of Hand-spinning

Opinion is divided on the question of the economics of hand-spinning. There is no doubt that sentiment plays a larger part wherever preference is shown to hand-spun and hand-woven cloth, as the cost of this cloth is definitely higher than that of hand-woven cloth produced out of mill yarn. But it is under present conditions the only means of adding to the meagre earnings of the ordinary agriculturist, if he takes to it for want of a more suitable subsidiary occupation. Ordinarily he grows his cotton, his womenfolk are not alien to the art of spinning and in the village domestic economy, he finds his coarse cloths more suitable to his taste and calling. To the old and infirm and to those who could find no better occupation, however meagre might be the earnings, it is a substantial addition to the family income in the absence of a more agreeable occupation suitable to the social status of the different classes of people. Hand spinning has its own merit. Industries like coir spinning, palmyra plaiting, etc., which give no better income, are still carried on and, compared to them, hand spinning is more homely and dignified. The industry involves so little initial outlay and the mechanism of the *charka* is so simple that an ordinary carpenter could prepare it without much labour. Although the occupation may be monotonous, it does not demand any physical strength beyond staying power.

In the province of Madras, the Government could encourage the industry in the following directions:—

(1) By the evolution of an improved *charka*, if necessary, by offering rewards for the most successful invention.

(2) By improving the hand-ginning machine and the carding bow.

(3) By arranging for the supply of good cotton to the spinners at important centres, and, if possible, in carded form.

(4) By standardizing counts and hanks.

(5) By supplying *charkas* and other appliances on hire purchase system.

(6) By purchasing Government requirements of cloth in *khadi* as far as possible. The local bodies could also help the industry by introducing spinning as a subject of study in schools.

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Future Markets for British Textiles

WRITING on the subject of markets for British textiles in the future in the *Textile Mercury and Argus*, " Exporter " says:—

" The already well developed textile industries in countries which were big markets for British goods have increased so much during five years of war that it is advisable for British manufacturers to consider what future needs are likely to be.

Latin America, Australia, Canada and India have their own textile industries covering the entire process from spinning to finishing and making-up, and what is even more important, they are producing so much more than their own requirements that they are competing with us for export to smaller markets in their own spheres of influence to which freight costs are less for them than for us.

India, as a rapidly expanding cotton growing country naturally commenced to manufacture, mixing imported cotton with her own coarse staple. This admittedly caters only for low class trade but that is the bulk Indian market and the capacity of the industry is growing rapidly towards total needs.

The major markets for cheap and medium piecegoods are lost to us for ever, therefore we must sell them high-grade goods they cannot produce themselves. Many markets, large and small, have also been lost for made-up garments. Only by reciprocal trade which will raise the local standard of living can we hope to get them back in some part.

Whether greater productivity within the industry can be allied to high quality is a matter for the technician, but it is certain that lower production costs are necessary if we are to expand the sales of high-grade cloth by bringing it within the means of a wider public.

There is still time and scope for Great Britain to become a larger rayon producing country than previously by the seizure of German and Italian markets before those countries can get into production again. There are also the pre-war markets of the Japanese rayon trade.

Just as rayon came to the rescue of a diminishing cotton industry after the last war, so after this one will come plastics. Research into the making of plastic textiles has made a big advance, though it is suspected that the United States are much ahead of us, and their potentialities are as yet little realized."

Indian Central Cotton Committee

Half-yearly Meeting in Bombay

THE half-yearly meetings of the Indian Central Cotton Committee began on the 22nd January and concluded on the 27th January 1945, Mr. H. R. Stewart, C.I.E., Vice-Chairman, Imperial Council of Agricultural Research, presiding.

Sir Chunilal B. Mehta was re-elected Vice-President for 1944-45 and the various Sub-Committees for the year were constituted.

Considerable discussion took place on the subject dealing with the part cotton should play in the post-war planning of agricultural production. In this connection, the Committee had before it the report of a Special Sub-Committee which was appointed to examine this subject and make recommendations. It was revealed that Provincial Governments and Indian States had already reduced or proposed to reduce in the current year the acreage under cotton by 2,000,000 acres as against 3,100,000 acres (2,000,000, under short staple, and 1,100,000 under low grade medium staple) suggested by the Committee. In the opinion of the Committee the target to be aimed at was a cotton acreage not exceeding 16,100,000 acres next year as against 19,200,000 acres in 1942-43. To implement the plan certain recommendations were made which included the stoppage of irrigation water for short-staple cotton production in canal-irrigated tracts, the reduction of the cotton acreage by compulsion, where necessary, and, the prohibition of the mixing of cotton in ginning and pressing factories by legislation. It was agreed that Provinces and States which are compelled to reduce the area under cotton and which, as a consequence, will not produce sufficient cotton seed for cattle feed should be allowed to import cotton seed freely from surplus cotton seed areas.

Subsidy on American Cotton Exports

The position arising from the proposed grant of a subsidy on American cotton exports was considered and it was decided that, in view of its adverse effect on Indian cotton, the Government of India should be requested to take up the matter with the U.S.A. administration through His Majesty's Government, and that in the event of any International Cotton Conference being held to consider this matter, a representative from India should be appointed to it in consultation with the Indian Central Cotton Committee.

Appreciative references were made to the valuable work done by Sir Chunilal B. Mehta in the interests of Indian cotton and the Indian cotton grower during his recent visit to the U.S.A. as the leader of the Indian delegation to the International Business Conference.

The financial position of the Committee was examined and, in order to enable the Committee to extend its sphere of activities, especially in the post-war period, it was decided that a recommendation should be made to the Government of India for an increase in the cotton cess from 2 annas to 4 annas on every bale of cotton exported or brought under process in a mill. It was also suggested that Indian States should be addressed to fall in line with British India in this respect.

A resolution was passed recommending that steps should be taken for the early import of new or reconditioned textile machinery from the U.S.A. or the U.K. in order to solve the twin problems of reducing the large surplus of short-staple cotton and relieving the general shortage of cloth and yarn in the country. The resolution further urged that concessions in the matter of taxation should be afforded to mills.

The desirability was stressed of continuing, as a permanent feature of cotton statistics, the compilation of statistics of Indian mill consumption and the stocks and receipts at mills of Indian and foreign cotton by varieties, which are at present required to be furnished compulsorily under the Defence of India Rules to the Cotton Movements Committee, and it was decided to address the Government of India in the matter.

New Schemes

The progress and final reports on certain schemes financed by the Committee were examined and recommendations made regarding future lines of work. The new schemes sanctioned by the Committee were:—Scheme for the distribution of seed of M4 (a new early type) on the right and left banks of the Indus, the scheme for distribution of 'Suyog' (substitute for 1027 A.L.F.) in Navsari District of Baroda, the scheme for multiplication and distribution of an Asiatic strain Sel. 69 and he Mysore-American strain M.A.V. in Mysore State. A revised scheme for manurial trials in Sind was also sanctioned. The Committee also agreed to the extension of the following schemes for varying periods:—Scheme for the cultivation of 1027 A.L.F. in Nawapur taluka in West Khandesh, scheme for the improvement of the red tinted Cocanadas cotton in Madras Province and the scheme for the grading and marking of 1027 A.L.F. and Suyog cottons in Surat District.

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The Effect of Storage on Indian Cottons

Results of Experiments on *Broach Deshi 8*

THE present paper* gives an account of the effect of storage, under certain specified conditions, on some of the important properties of Indian cottons. The conditions of storage were, (1) Bombay weather, (2) controlled humidities at room temperature and at a constant temperature, and (3) controlled humidity combined with watering of cotton. The characters studied were (1) fibre-strength, (2) incidence of infection, and (3) shade of cotton. In addition, tests were also made on fibre length, fibre weight per inch and the spinning quality of the cotton. The following conclusions are drawn from the results:—

(1) Broach Deshi 8, when stored in Bombay for 2½ years in the form of a bale, showed distinct signs of deterioration in quality, as indicated by the following features: (*a*) decrease in staple-length, which, unless it was due to sampling, could be attributed to the internal corrosion of the fibres which helped in their rupture in repeated opening and repressing of the bale; (*b*) increase in the number of yarn breakages in the ring frame; (*c*) a downward trend in yarn strength; and (*d*) increase in fungal damage to fibres. The extensibility of the yarn was found to increase slightly with storage of cotton.

(2) Storage in desiccators at controlled humidities below 90 per cent. R. H. did not lead to any deterioration in bundle-strength over a period of two years, but at saturated humidity the deterioration was so rapid that both Broach Palej and Broach Deshi 8 decayed completely in four to five months.

(3) Storage at humidities immediately above 90 per cent. R.H. resulted in loss in strength, the loss being more rapid at higher than at lower humidities. Thus, the critical limit lay between 90 and 92 per cent. R.H. The rate of decay increased even with a small increase in storage humidity above 90 per cent. R.H.

(4) The incidence of infection was significantly lower for Broach Deshi 8 than for Broach Palej, and there was a significant increase in the percentage of infected fibres in samples stored at 75 per cent. R.H. and higher humidities.

(5) Broach Deshi 8 was slightly whiter in shade than Broach Palej; the shade remained unaffected in storage at 60 and 75 per cent. R.H. for a period of two years, but at 90 per cent. R.H. and higher humidities the shade of both cottons deteriorated gradually.

(6) Strength tests on small samples stored for two years in petri dishes for shade measurements showed that even at 75 per cent. R.H. there was a loss in strength especially in the lower half of the sample. The reason for this loss in strength, which was not shown by the samples stored in desiccators, was found in the accumulation of moisture in the samples in the petri dishes.

(7) Storage for 1½ years at different humidities and a constant temperature of 92°F. did not lead to any decrease in strength or increase in incidence of infection, showing the important role of temperature as a controlling factor for fungal growth. The success of a comparatively low temperature in arresting fungal growth was probably due to absence of any water in the desiccators. This result brings out the importance of storing the cotton in a dry godown.

(8) When cotton is wetted with localized watering, as by the sprinkling or spraying of water, it always results in a loss in strength and shade in the damped region. The loss in strength increases rapidly with the humidity of the atmosphere in which the cotton is stored, and it generally goes hand in hand with increase in fungal infection of fibres. The evil effect of adding water to cotton before pressing it on the ground that dry cotton would not press well, is clearly brought out by these results.

(9) Addition of 0.5 to 1 per cent. of formalin of correct commercial concentration to water was found to be quite efficacious in checking the deterioration of cotton on storage. We must, however, make it quite clear that we are not at all in favour of watering cotton in any form whatever, but, if it is indispensable, its evil effects can be greatly reduced by the use of the above-mentioned antiseptic.

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* I.C.C.C. Technological Bulletin, Series, B, No. 31, By Nazir Ahmad, O.B.E., Ph. D., F. Inst. P., and A. N. Gulati, M. Sc. Price: Re. 1-0-0.

Bichromate Manufacture in India

All-India Association Formed

WITH a view to forming an All-India Bichromate Manufacturers' Association, a conference of the trade interests concerned was convened on Friday 2nd February at the Indian Merchants' Chamber, Bombay, under the presidentship of Mr. J. C. Setalvad, President of the Federation of Indian Chambers of Commerce and Industry. The following are extracts from the welcome speech delivered on the occasion by Mr. B. S. Lalkaka, Chairman, Bombay Bichromate Manufacturers' Association:—

" Sodium and potassium bichromates are mainly required in khaki dyeing, leather tanning, and for the match industry, besides other minor uses as also for the production of several useful chemicals like chromium sulphate, chromic acid, chrome alum and for making chrome pigments like chromium oxide green, etc.

" The principal raw material needed for this manufacture is chrome ore, mineral available in great abundance in the Mysore State and at Chaibasa in Central India and on the borders of Baluchistan and elsewhere, which before the war used to be exported to foreign countries in large quantities to be returned to us as a finished product. It is a matter of great pride and satisfaction to us as manufacturers of bichromates that due to the impetus given by the war and certain favourable circumstances, we have been enabled to step into the breach and to fill in the void created by the cessation of imports from abroad owing to lack of shipping and other difficulties in the path of the Government.

" Amongst other raw materials needed are soda ash, lime, sulphuric acid, fuel oil and/or coal, which could be easily available in India.

" The average normal consumption of bichromates in India before the war may be taken roughly at about 3,000 tons per annum. But due to the large requirements of the military for khaki cloth and for tanned leather, etc., the demand went up by leaps and bounds and almost doubled itself in war-time. This had to be met anyhow and as only limited supplies were available from the United Kingdom, large quantities had to be imported from the United States of America under Lend-Lease, in spite of the acute shipping position, which no doubt created a rather serious situation for the Government.

" It was in these circumstances that the Government of India in the Commerce Department had to turn their attention very seriously to production in our own country to fill the gap, and this is how the bichromate industry came to be started and established here in the year 1941-42 at the sole request and desire of the Government and under promise of full support and protection at the proper time from no less an authority than the Hon'ble Sir Ramaswamy Mudaliar, the then Commerce Member, on the condition that the affairs of the industry would be conducted in an efficient and business-like manner so as not to be a burden on the country.

" Several factories in various parts of India were started, e.g., in Bombay, Madras, Mysore, Calcutta, Cawnpore, etc., of which some have already shut down, being unable to stand the stress and strain of altered circumstances. A Chrome Compounds Control Order was also promulgated and rates contracts were entered into between the Government and the respective suppliers after detailed examination of the accounts by a Government costing officer of the Finance Department, in order to regulate the production, sale and costs of the indigenous manufacture. Be it said to their credit that upto now we have received fair treatment on the whole from the Government Supply Department, both in the matter of sales and distribution as well as in the procurement of any raw materials and equipment necessary for economic production.

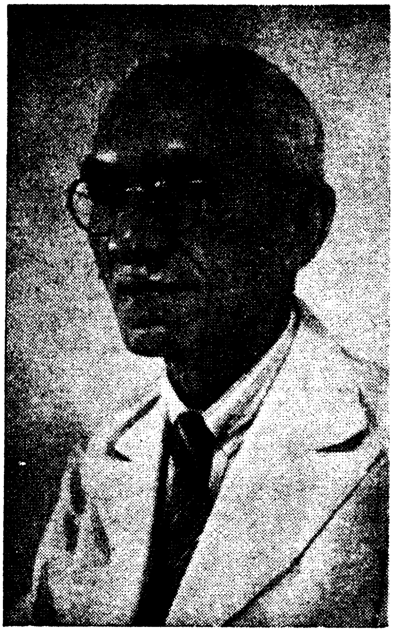
" It may also be added that having regard to the importance of the bichromate industry to India, the Government even thought it fit to depute Dr. N. R. Damle, Industrial Chemist to the Bombay Industries' Department, to England and America to study bichromate manufacture in those countries with a view to giving the benefit of his help and guidance to the local manufacturers.

"So far so good. But, with the possible end of the European war in sight, signs are not wanting to indicate that wherever and whenever possible, the interests of the big nations with international cartels will prevail to the detriment of their less advanced confreres and unless we Indian manufacturers also pull together and take concerted action our cry will be like one in the wilderness.

"These considerations originally led the Bombay bichromate manufacturers to form themselves into a local association to protect their interests and this association, I am glad to say, has even been recognized by the Government of India in the Supply Department.

"We have, however, reached a stage when from humble beginnings, the puny infant has grown into a lusty child that demands further space for expansion, particularly in view of the fact that our industry has now grown and can even claim to meet the whole of the country's requirements—price for price and quality for quality—provided we have also equal facilities and cheap raw materials at our disposal. The time has therefore come for us to formulate our demands before the Government to *stop all imports* and to implement their solemn pledges of giving us adequate support to enable us to withstand any ruthless competition which is bound to arise very soon, by devising ways and means in due consultation with the interests concerned.

"This is why it is thought imperative that an All-India Bichromate Manufacturers' Association may be formed with the goodwill and support of all those present here."



Mr. Behramji S. Lalkaka.

President's Speech

The following are extracts from the presidential speech of Mr. J. C. Setalvad:—

"The bichromate industry is one of those industries which were encouraged by Government in the early stages of the war when foreign imports became unavailable for the successful prosecution of the war. It is but fair, therefore, that the industrialists concerned should look to Government for necessary protection at a crucial time when their need was most urgent. If we are not organized to meet the danger that is before us, many industries will have to go to the wall. At this crucial moment all industries have to combine and put their heads together to solve their immediate problems and you could be no exception. You have wisely gathered in this conference to come to a decision regarding the formation of an all-India association of your trade. Most of the industries started during the last war went to the wall as a result of Government apathy in formulating any policy for the encouragement of nascent industries. Government should not be allowed to follow that policy again. With all the sympathies that the Government of India are expected to have in regard to industrialization of India, they have many limitations which, if not countered by the industrialists of this country, would react very unfavourably on the entire economy of this country. Fiscal autonomy exercised in the interests of India would mean the raising or lowering of the tariff walls to suit the needs of Indian industries, and India's interests demand that bounties and subsidies should also be made available."

Resolutions

The following resolutions were moved at the conference by Mr. Purshotamdass Popatlal, Managing Director of the Pioneer Chromate Works Ltd., and they were duly seconded and supported.

"This Conference of All-India Bichromate Manufacturers notes the assurances given from time to time by the Government of India about protection to the bichromate industry and desires that:

(*a*) So long as the production of bichromates is regularly continued and grows in strength to be able adequately to cope with the growing demand in India, imports must either be stopped or so regulated that the indigenous production does not suffer or is not wiped out of existence.

(*b*) Pending establishment of a permanent Tariff Board, the Government of India should consider favourably a rebate of import duty on soda ash and fuel oil used in this industry.

(*c*) Now that the indigenous bichromate industry can meet all requirements, use of alternative dyes or other substitutes for dyeing khaki cloth which would displace the use of bichromates should be stopped as a measure of protection to this industry."

"This Conference requests the Government that for economic stabilization and expansion of the bichromate industry on planned and national basis, encouragement should be given for the manufacture of other chromium compounds such as chromium sulphate, chrome pigments, chromium oxide green, chromic acid, chrome alum, etc., for the manufacture of which bichromate is an essential raw material, and also for the manufacture of by-products such as sodium sulphide, sodium sulphate, etc."

"In view of the possibility of the existing production in India becoming surplus during post-war period, due to reduced demands of khaki cloth, this conference requests the Government of India to arrange for export markets in the Middle and Far East countries. While negotiating trade agreements with neighbouring countries, provision should be made for such exportable surplus of Indian bichromates."

"This conference requests the Government of India to control new ventures for the manufacture of bichromates in India taking into account the existing production."

"This conference views with concern some of the recent measures adopted by the Advisory Committee of Dyes and Chemicals of the Textile Board in so far as they have adopted the use of vat and sulphur dyes, which are not indigenous products for khaki colour, thereby displacing the use of bichromates to that extent. It also requests the Textile Commissioner to provide for representation of the bichromate industry on the Chemicals and Dyes Committee to watch the interests of the industry."

"This conference resolves that the numerous announcements of the Government of India assuring protection to bichromate industry should be confirmed by a statutory enactment providing for ample protection, thereby supporting the efforts to put it on a sound and economic basis."

"This conference resolves that an All-India Bichromate Manufacturers' Association be and is hereby formed with its registered office in Bombay and that a committee be and is hereby appointed to prepare a constitution for the Association."

All-India Bobbin Manufacturers' Association Bombay

AT the instance of some leading manufacturers of bobbins in India, a meeting of bobbin manufacturers was convened on 16th December 1944 at the Indian Merchants' Chamber Hall, Churchgate, Bombay, to consider the advisability of their forming into an association for advancing and protecting the interests of the Indian bobbin industry and to stabilize the industry. The bobbin industry in India at the moment is not protected or recognized as an important indigenous industry. Manufacturers have been operating under hardships and are not getting suitable raw materials owing to various difficulties.

At the first meeting, it was resolved to form an association and a sub-committee was appointed to draft a constitution and circulate it. The members again assembled at the Indian Merchants' Chamber Hall on 6th and 8th January, 1945, when they discussed and finally approved of the constitution. Three members were appointed as provisional trustees (1) to receive membership fees, (2) to open a banking account, (3) to get the constitution signed by the founders and other members willing to join, (4) to get copies of the constitution printed and to circulate the same to bobbin manufacturers in India and invite them to join and (5) to hold a first general meeting of the Association for the election of office-bearers in the first week of March 1945. The members who have joined hope that other manufacturers of bobbins all over India will join and give their wholehearted support to the Association now formed. Full particulars about the Association can be had from the All-India Bobbin Manufacturers' Association, No. 5, Ali Chambers, Tamarind Lane, Fort, Bombay.

University Department of Chemical Technology

Sir Homi Mehta's Address at Annual Gathering

THE tenth annual gathering of the Department of Chemical Technology, University of Bombay, was held on the 24th January 1945, with Sir Homi Mehta as chief guest. In welcoming Sir Homi Mehta and the other guests to the function, Dr. K. Venkataraman, Director of the Department, said that he was glad to have the opportunity of personally conveying to Sir Homi Mehta the thanks of the students and staff of the Department for his munificent endowment, which has enabled the University to institute Readerships in Oils, Fats and Soaps, and Plastics, Paints and Varnishes, and to equip the sections of Oils, Fats and Soaps and Foods and Drugs. Two other events of the year were the endowments from the Millowners' Association, Bombay, and the Topiwalla Trust, the former for work in textile chemistry and dyestuff technology, and the latter for constructing and equipping a pharmacy laboratory.

Sir Homi Mehta then addressed the gathering. Sir Homi said:

" I thank the Department of Technology for inviting me to be the chief guest at this gathering. It is worthy of note that in a comparatively short time this Department has rendered commendable service to the textile industry.

" I have always found that India was lagging behind in science and research to a very large extent. Why should it be? We have excellent talent in this country though it may be latent, but one thing is certain, that India can rise along with other countries in the world and can show its merit. There is large scope to produce great men as other countries have produced. That being so, it affords me great pleasure to see that this institution, with young men trained under such highly qualified professors, may have really a chance to do good to the country. If you can produce in ten years real talent, perhaps if not the whole of India, a greater part of the country will benefit. There are not many well-equipped scientific works in this country such as we find in America, Germany, England and other progressive countries. We have now made a beginning—perhaps it is a slow beginning, but a beginning has been made and it is within us to develop it to an extent by which we can come forward and play our own part against all other civilized countries.

" Our textile industry, in which you are greatly interested, is one of the oldest industries in this country. This industry requires a lot of young men who have gone through their examinations in scientific research, and who will have a great place in this country to develop the cotton industry on the same lines as Europe and other countries have developed. I am very sorry to say, though I am considered a cotton expert, that this country is far behind other civilized countries in the cotton industry, at least by 25 years. No one during all these years has paid any attention to research and scientific treatment of cotton. Perhaps there were no students like you at that time. In the beginning we were dependent upon the British coming out to this country for erecting cotton mills and managing them, the masters not knowing the A B C of the industry; and while these outsiders were paid fat salaries the industry paid little. Those who invested money got small returns—that was all. Nothing was taken very seriously and nothing was done on scientific lines; and the result is that after 50 years of our experience in the cotton industry, we are dependent on England and on Japan, and we have to ask the Government of India to find subsidy and to put up tariff walls against England and against Japan over 50 per cent. duty. That shows that we have merely wasted 60 to 70 years of our lives in this industry, and we are still continuing under 50 per cent. subsidy here to sell our goods in our own country.

" The curious fact is this—England does not produce even one pound of cotton, neither does Japan, and still they can compete by carrying the cotton either from America, Egypt or India to their own countries after paying freight and other expenses, and after working that cotton in their mills send us goods about 15 to 50 per cent. cheaper than we can produce. This is not a small thing; it is a very serious thing where millions of India's money have been engaged in this industry. Therefore, I depend upon you young men to come forward with their knowledge and help the industrialists who have money and who have already erected mills, to work them as their own and show their talent to such an extent that they should be taken as partners with a share in the profits. Owing to the present circumstances on account of the war, we had and we are having great advantage in our cotton industry. Well-established and well-managed mills which used to make a profit of 5 to 8 lakhs of rupees in the pre-war days are now making 70 to 80 lakhs a year. Huge profits have been made and huge profits are still recurring, but the profit is being carried away by the Government of India owing to the very high taxation in order to provide for the war. No less than 12 annas in the rupee go to taxation. That, being so, the industry cannot make great strides as one could have imagined. Still the profits are such that they are larger than before the war and, therefore, there is not much reason why the present-day advantage should not be availed of, and if a number of trained young men come forward and take charge of the departments and show how to run them properly, more money can be made in the post-war reconstruction of our cotton mills.

" First of all, cotton is a raw material. It is subdivided into hundreds of qualities ranging from ½" in length to 1" in India, in America from ⅞" to 1⅛" and in Egypt from 1" to 1¾". The misfortune of this country is that our agriculture also is hundreds of years behind. On one acre of soil in America they grow 280 lbs. of cotton, in Egypt they grow about 180 lbs. to 200 lbs. and India only produces between 75 and 80 lbs. They say labour is cheap and the holding of acreage is small, and, therefore, they cannot use mechanical appliances which are so largely used in America and other parts of the world. There may be some truth in this, but the greatest truth that we know is that India has been producing cotton not for dozens and hundreds of years, but for thousands of years. Consequently the soil is getting poorer and poorer every day and has actually become unfertile. The land is not well preserved and is not scientifically treated with proper manure and chemicals which are required to give good results. If things are allowed to go on as they are now, it is possible that after some time cotton growth may be extinct. Therefore, greater attention is to be paid to the agricultural side and I hope there would be mill magnates coming out to help agricultural institutions to make India a formidable country in agriculture. If the people depend on the Government of India and think that it should look after their interests, they are making the greatest mistake of their lives. There is no Government in the world who can do that. Men who have money must come forward to help agriculture and in that way develop the country.

" The selection of cotton is the first thing in a cotton mill for getting the best results in the finished goods. If this is not done scientifically, the whole structure falls to pieces. Cotton is the foundation on which rests the structure, that is the finished articles. Then come your departments of scientific bleaching and dyeing. People consider here that sizing is only an ordinary thing. They seem to think that just by mixing a little French chalk, china-clay and tallow they make a good sizing. No, sizing depends upon climatic conditions—you have to consider the climatic conditions. For the summer part of the year you require certain proportions and ingredients, in the monsoon the requirements are quite different, and in the winter these are different again. These things in England and Japan are not in the hands of the man who manages the mill, but it is in the hands of the scientists and research men who give formulæ for size mixings, which give a good weave and good cloth. Here in India they find fault with the poor labourers. The workers are not to be blamed, but the managers and others who have the charge of the mills, and they, instead of blaming themselves, blame the poor people.

" Bleaching and dyeing are highly scientific. Even to-day it is said that there is no country in the world to equal Lancashire which produces the best bleaching in the world. Some say that it is due to the special quality of the water, etc., which cannot be found anywhere else. Dyeing is also a highly technical subject, and you are all aware how Germany has risen—it has not made millions but tens of millions and hundreds of millions in dyes. For dyes which were 4 annas per lb. before the war broke out, you will be surprised to hear, we are now paying Rs. 90, and you can gauge how much it has risen. It is not 900, but 3,600 per cent. Why cannot India produce any dyes? If she produces something to-day, the next day she produces something else quite different. I hope your Department will recognize that, and by research provide young men who can revolutionize this industry.

" To-day, Europe, America and Japan are in the throes of this world war. Millions of young men between the ages of 20 and 30 are killed. The man who invented the first combustion engine is the greatest criminal of the world! They had invented it for doing good to the country, but to-day they are using these in all the aeroplanes which are doing such destruction in the world. Science can do immense good, but at the same time it can also produce things which can kill hundreds of thousands of people very quickly. Germany is building V-1 and V-2 bombs to destroy things not only over hundreds of miles away, but thousands of miles away, and America is afraid that these might come to New York even. Such are the inventions of this scientific world. Americans have built Super-fortresses which in addition to their heavy weights on their body, carry about 30 to 40 tons of bombs, and going over 3,000 miles and coming back after having unloaded their cargo. So there are advantages and disadvantages which your professors can explain and which I, as a layman, cannot

" We are bound to advance, and people say we have done so, but I honestly believe that the progress is negligible. We have talent, we have great talent, but it is not cared for either by Government or the community. The community has a greater duty to perform to find out such talent and to see that India progresses in industry which can give greater life and greater support to the younger men, and I am positive that students of such service will be always taken care of by the public.

" Gentlemen, you must study Russia's experience of only 15 years. During the Czarist period, the fate of Russia was perhaps far worse than that of India. But in the 25 years of Soviet Government after the last war, 10 years they wasted fighting amongst themselves. But for the last 15 years they have devoted themselves both scientifically and economically to improving the condition of the poor and in finding means for their comforts and needs of life. After having done that, they have got schools and colleges in every town where one unit can take care of 25 men or women or children, and at the same time can find help for every one in Russia. Primary education is absolutely free. Middle class education can be had at a very small expense, and for higher education they have facilities as also for research.

" When Russia was invaded by Germany, we have all seen that she fought with all that she had for the love of her country; otherwise she would not have fought against such highly mechanized German forces. They were devoid of means to stand against the great guns that Germany's science had produced. They did not sit quiet. They took the help of Britain and America, and at the same time put up huge factories in the Ural mountains to provide machines and guns of the same calibre and quality. They spent days and nights to procure materials and guns which can serve better than any produced by England or America or the Germans. Having done that, to-day you see the fruits of it. A nation which was very nearly crushed, for if Stalingrad had fallen Russia would have been wiped out, the Russians have turned the table within two years, and to-day they are such a mighty power that I am sure they will win the war within six months. If Russia can be like that within 15 years, why should not India ? "

Cotton Plant Puller Propaganda

By C. V. Sane (in *Indian Farming*)

Deputy Director of Agriculture, Southern Circle, Baroda

THE spotted bollworm of cotton is known to do very serious damage to the cotton crop in yield, colour and staple, particularly in Gujarat. The damage in any particular year depends upon the intensity of the attack. Study of the pest was taken up by the Indian Central Cotton Committee, and it was found that a thoroughly protected plant would yeild about 25 per cent. more cotton and be definitely earlier than when not so protected. This earliness was particularly valuable in years of frost. As a result of the research on the subject, it was found that the most practical way of ensuring this protection was by having a close season of at least eight weeks, during which the bollworm should find no place for shelter or food to carry on the brood between close of harvest and starting of another cotton crop.

Old Method and the New

The usual method of dealing with the old cotton stalks was to hack them with a spade which left all the underground root system intact and which in the soils of Gujarat soon produced secondary growth which was more than enough for giving the bollworm plenty of opportunity to continue the brood so as to be in readiness to attack the next crop of cotton.

The plant puller takes away the main root system along with the stalk, so that secondary shoots do not come up. If plant-pulling is effectively and generally done, the bollworm's supply of food and shelter is completely cut off. There is the possibility of alternative hosts, but the main danger is removed. In addition or even apart from this protection due to food scarcity produced thereby for the bollworm, the plant puller in actual use has been considered by all discerning farmers as an invaluable addition to their not very large armoury of implements. It has been observed without exception that the removal of the underground cotton stalk with the larger roots helps cultivation after rains so markedly, and thus saves the then precious time so unmistakably, that even for this facility alone, the plant puller was worth bringing into general use. The breaking of the harrow against a deeply set root stock, needing return to the village and the loss of time occasioned by having every now and then to stop to clear obstructing stem portions can only be appreciated by those who have had to put up with it. To these the introduction and use of the plant puller is a veritable treasure ensuring smooth cultivation without stoppages.

What Propaganda Can Do

However, having a finding in a research scheme is one thing and getting it to the ryot in a manner which will ensure general adoption is another. The mass of farmers is not easily convinced, and intensive propaganda and demonstration are necessary before even some footing is secured. This was carried on in the two districts of Navsari and Baroda of the Baroda State since August 1934 for four seasons with funds provided by the Indian Central Cotton Committee and for two seasons more as a joint scheme of the State: the Indian Central Cotton Committee's contribution was nearly Rs. 30,000 for the period.

Progress in the two districts has not been on the same level of intensity or response. In the Navsari District, in spite of its acknowledged usefulness, the plant puller did not catch on with the same ease or intensity as in the Baroda District. In the Baroda District, over 21,000 plant pullers were sold during this period for propaganda and demonstration as against 7,152 in the Navsari District.

The area under intensive attention in Baroda last year was over 1,40,000 acres and represented an intensity of 90 per cent. and above of plant-pulled cotton in certain areas.

This has been achieved by intensive propaganda in successive areas by means of magic-lantern lectures, distribution of leaflets in thousands and discussions and demonstrations by plant puller competitions and field tests.

The doubters and others who were critically conservative raised three points against the use of the plant puller: (*a*) loss of organic matter from roots removed, which otherwise remained in the soil; (*b*) bad physical condition of the soil consequent on root pulling, leading to a poor stand; (*c*) greater cost of plant pulling because it was considered that more labourers were required for plant pulling as compared with digging.

Objections Answered

These are clever destructive arguments. The first objection was easily answered when instances of holdings practising plant pulling for several years were known not to have suffered any reduction of yield of cotton or of fertility traceable to the supposed loss of organic matter. The second point of poor stand could not be disposed of straightaway. It had to be put to test for the satisfaction of those who were sincerely doubtful. Several tests both in Navsari and Baroda showed no difference in stand in the areas treated with the plant puller and adjoining areas cut with the *kodali*. In 1940-41, nine such tests in Dabhoi, Baroda, Padra and Waghodia talukas showed an average increase of 10 per cent. in yield on the plant-pulled portion as compared with the adjacent cut-over portion. The fear that the use of the plant puller may bring on a poor stand and so a reduced yield is not substantiated by any serious observation or tests, the areas treated with the plant puller actually showing higher yields. The third objection of increased labour cost has something in it, as a certain amount of experience is necessary in handling the plant puller, like any new device. Even so, it was amply demonstrated in the plant pulling competitions, of which we had more than 20 in the course of the propaganda in both the districts, that an acre a day per

(*Continued on page* 323)

The Indian Cotton Textile Industry (1880-1939)

By V. RAMAKRISHNA RAO, M.A., M.Litt. (Econ.)

(*Specially Contributed*)

THE Indian cotton textile industry is the biggest national enterprise which represents a total capital investment of well over 80 crores of rupees, which gives direct employment to no less than 450,000 workers and indirect employment to perhaps as many in the subsidiary industries and which is the largest consumer of Indian cotton—366,000 bales out of 5 to 6 million bales produced in the country. Its contribution to our national income, if the wages paid to the workers are included, is about 140 millions of rupees. It is not only the largest indigenous industry but it is also the largest exporting industry. The value of total cotton exports to overseas countries on private account alone, i.e., exclusive of those made on Government account, was 46 crores of rupees in 1942-43 or 25 per cent. of all the exports from India. Therefore, it is interesting to study the growth of this great national enterprise whose importance in our national economy cannot be exaggerated.

This great national industry dates as far back as 1818 when the first mill was started in Calcutta. The first mill in Bombay, which was destined to be the home of the cotton mill industry, was the result of Parsi enterprise and began working in 1854. Since then the industry has experienced great development in spite of the occasional setbacks due to famines, plague, foreign competition, fluctuations in exchange and in the prices of cotton and apathy and indifference of the Government.

The early concentration of the industry in the island of Bombay has been governed by factors other than natural and permanent, such as abundance of capital and credit facilities, the presence of cheap and speedy means of transport, and the temporary growth of demand for yarn from China, which Bombay was in an exceptionally favourable situation to meet. The year 1877 is notable in the history of the development of the industry from the point of view of its distribution. It saw the beginning of the rapid growth of mills in the up-country centres like Nagpur, Ahmedabad, Sholapur, etc. This later development was influenced to a great extent by natural factors such as the vicinity of sources of raw materials, plentiful supply of cheap labour and large markets. The wider distribution of the industry was also aided by the development of railways in India. Mention must also be made of the growth of the *swadeshi* movement from 1895 which in the absence of encouragement of the Government, tended to foster the rapid rise of the textile industry. The island of Bombay was losing ground, due mainly to the rapid decline of Chinese imports of Indian yarn and the very high labour and transport costs. Lately the factory legislation in British India created a tendency for the industry to migrate to the Indian States where factory legislation was not enforced strictly.

Though the industry dates as far back as 1818, complete statistics were not reported till the year 1879-80. The table below shows the growth of the industry from 1879-80 to 1913-14, i.e., upto the commencement of the last world war.

TABLE 1

Period	No. of mills	Persons employed (000)	Looms (000)	Spindles (000)
1879-80—1883-84 ..	63	51	14	1,610
1884-85—1888-89 ..	93	76	18	2,296
1889-90—1893-94 ..	127	116	25	3,263
1894-95—1898-99 ..	156	150	36	4,046
1899-1900—1903-04.	195	172	42	5,009
1904-05—1908-09 ..	218	216	60	5,549
1909-10—1913-14 ..	257	243	88	6,406

Taking the average for the period 1879-80 to 1883-84 as 100, we find that the number of mills increased by 308 per cent., number of persons employed by 374 per cent. and looms and spindles increased by 508 per cent. and 298 per cent.

In 1892-93 the Bombay Presidency possessed 74 per cent. of the mills, 83 per cent. of the looms and 75 per cent. of the spindles. This shows there was greater concentration of weaving industry in Bombay than spinning. By 1911-12 the share of Bombay fell to 68 per cent. of the mills, 77 per cent. of the looms and 70 per cent. of the spindles. This shows the process of wider distribution of the industry.

Another trend to be observed in the distribution of industry was the rising importance of Ahmedabad as a centre of the cotton textile industry. For example, in 1892-93, out of 88 mills located in the Bombay Presidency, 60 were located in Bombay Island, 21 in Ahmedabad and the rest in other centres of the presidency. In 1911-12, the position was that 85 mills were located in the island of Bombay, 59 in Ahmedabad and 20 elsewhere in the presidency.

The growth of the industry is also seen from the statistics of production of woven goods and yarn.

TABLE 2

(Million lbs.)

Average for	Yarn	Woven goods
1896-97 to 1900-01 ..	443.9	91.8
1906-07 to 1910-11 ..	636.8	194.1

In 1896-97 the percentage of indigenous production to the imports from abroad was 19.3 per cent. and in 1913-14 the same rose to 35 per cent.

This gradual and sustained development without State aid received considerable stimulus from the conditions created by the last war. The large patronage extended by the Government to the mills in respect of military requirements, together with the sharp decline in the imports from Lancashire as well as the steep rise in the prices of imported cloth, gave a fillip to the home industry, although the difficulty of importing machinery prevented as speedy a development as would otherwise have taken place. The progress of the industry during this period is shown by Table 3 below.

TABLE 3

Period	No. of mills	Persons employed (000)	Looms (000)	Spindles (000)
Average				
1909-10 to 1913-14 .	257	244	88	6,406
1914-15 to 1918-19 .	277	278	111	6,629

The production of the woven goods increased from 1,164 million yards in 1913-14 to 1,640 million yards at the end of the war. In terms of the import of foreign cloth, the production rose from 35 per cent. to 114.9 per cent. in 1918-19, that is to say, more than 50 per cent. of the home demand was met by the Indian mills.

The same period saw also the improvement in the quality of the goods produced. For example, in 1913-14 the percentage of yarn of counts 1 to 25 to the total production was 91 per cent. and the same dropped to 87 per cent. in 1918-19.

The wider diffusion of the industry continued during the war and in 1918-19, out of 258 mills at work, only 85 were located in Bombay Island, 61 in Ahmedabad and the rest elsewhere.

The prosperity enjoyed by the industry during the war is seen from the fact that in 1918-19, the dividend declared was as much as 40 per cent. in Bombay Island. This continued upto the year 1922.

From this year onwards, the industry entered on a period of ' atrophy ' caused by the post-war depression, keen foreign competition, labour troubles, over-capitalization, etc. These conditions are reflected in the amounts of dividend declared in 1925, which was as low as 2.2 per cent. The competition of Japan in the home market as well as in the Near East and African markets was severely felt. The severity of the Japanese competition is seen from the fact that the imports from that country were 108 million yds. in 1922-23 and in 1929-30 they rose to 562 millions yards. The depreciation of the yen and the reorganization of the Japanese industry by rationalization made the competition from that country still more keen. It virtually amounted to dumping of Japanese goods. Therefore, the industry made repeated representations to the Government for (1) repeal of the excise duty imposed on indigeneous production and (2) tariff protection against Japanese dumping.

After a good deal of representation in the country, the excise duty was abolished in August 1927. This is the beginning of State aid. But upto 1930, no protection to the industry was given by the Government. Therefore, it can be said upto this period, the industry developed from its inception as a result of the special advantages, (*a*) the fall in rupee exchange, 1873 to 1897, which gave protection to the extent of 25 per cent. to 100 per cent., (*b*) the *swadeshi* movement since 1895 and (*c*) the isolation of the Indian market during war.

From 1930, the growth of the industry was to a great extent due to tariff protection. As already mentioned, the Japanese dumping of cotton goods into India forced the Government to give protection to the industry. Further, the great economic depression, 1931-35, made it necessary to impose customs duties for revenue purposes. Thus the high revenue and protective duties helped the industry to make rapid strides. The progress of the industry under the shelter of tariff walls is seen from the tables given below:—

TABLE 4

	1932	1938	Percentages 1932	Percentages 1938
Bombay	81	69	23.9	18.2
Ahmedabad ..	78	78	23.0	20.5
Rest of India ..	180	230	53.1	61.3

The above table shows further deterioration in the position of Bombay Island. It is also seen that the growth of the industry during the period was entirely taking place outside Bombay Presidency.

The table underneath illustrates the phenomenal increase in home production.

TABLE 5

(Million of yards)
Production of piece-goods.

Year.	Quantity.
1922-23	1,725
1926-27	2,250
1929-30	2,419
1934-35	3,393
1938-39	4,269

During the period 1931-32 to 1938-39, Bombay's share in the total production fell from 39 per cent. to 32 per cent. while that of the rest of India increased from 38 per cent. to 46 per cent., the remaining being that of Ahmedabad.

With the growth of internal production the imports continued to shrink. There is no doubt that the civil disobedience movement of 1931-32 and boycott of British goods were two major factors responsible for the decline in foreign imports. In 1929-30, the total imports of foreign cloth was 1,882 million yards and the same declined to 647 million yards in 1938-39. The most remarkable thing to be noted in this period was the virtual loss of market for British cotton goods, the reduction being from 1,236 million yards to 205 million yards. This is so in spite of the preference shown to the British manufactures in the tariff duties. By 1938-39, the cotton industry was well established in the country with a virtual monopoly in the home market. This is an outstanding example of what can be achieved by protective tariffs.

Not only was there a large increase in the production of cotton tissues, there was also considerable improvement in the quality produced. The amount of yarn of counts 40 and above produced rose from 27.3 million lbs. in 1930-31 to 85.1 million lbs. in 1938-39, i.e., more than 300 per cent.

In regard to the size of the mill, there was not much improvement. This is explained by table 6.

TABLE 6

Average	1914	1931	1938
Spindles per mill ..	25,014	26,360	26,368
Do. looms..	383	532	527
Average spindles per loom	65	54	50

The present war affords another opportunity for the industry to set its house in order and to capture the entire Indian market and to face competition on equal terms in Eastern countries of Asia and Africa. It is gratifying to note that the Government control exports so that the quality of goods sent abroad is maintained and that they intend to build up a research fund out of the export cess.

Distribution of Industrial Activity in India

State in Relation to Industrial Location

"THE problem of industrial location has to be viewed from several angles. From the limited standpoint of each industry the dominant consideration must always be to secure the maximum efficiency of production and distribution. Indeed, no industry can prosper unless it is located at a place chosen from this point of view. Experience shows, however, that if industrial location is governed by this consideration alone, it may easily give rise to a variety of social and economic evils, such as excessive congestion in particular localities, concentration in vulnerable areas and wide disparities in the living standards of different sections of the population. Modern industrial communities which have suffered from these evils have begun to feel the need for some kind of regional planning of industry, which would aim not merely at maximum efficiency of production and distribution but also at an optimum distribution of industrial activity based on broader economic, social and strategical considerations."

Thus observes a memorandum of the office of the Economic Adviser to the Government of India on "The Location of Industry in India." This memorandum is intended to serve as a basis of discussion by the Policy Committees on Postwar Planning.

Distribution of Industrial Activity

On the whole, the memorandum observes, the distribution of industrial activity in India is extremely uneven. In 1939, as much as 52 per cent. of the total number of factory workers in India were found in only two provinces, namely, Bengal and Bombay. The economy of this country, it says, "is already heavily unbalanced as a result of its excessive dependence on agriculture and the disadvantages arising from this fact are further aggravated by this uneven distribution of industry. If India were highly industrialized, this excessive concentration of industry would not have perhaps been such a serious matter, but when the total number of factory workers is less than 1 per cent. of the total population, the concentration of 52 per cent. of this small number in two provinces reduces the share of other provinces to an even more insignificant figure as compared with their population. The wide disparities in the standards of living in different parts of India are at least partly due to the differences in the degree of industrial development." In recent years, however, the memorandum states, as a result of various factors there has been a gradual dispersal of industries to new centres. The tendency towards dispersal is most marked in the case of the cotton textile mill industry.

More Industrial Expansion in Indian States

According to the memorandum, there has been a pronounced tendency for new enterprises to be attracted to Indian States owing partly to various inducements offered by the States' Governments and partly to the relatively low level of rents and wages there. The possibility of escaping the incidence of high taxation in British India is an additional inducement. If the increase in factory employment can be taken as an index of industrial expansion, nearly 33 per cent. of the total expansion between 1921 and 1939 took place in the States, particularly Hyderabad, Mysore, Baroda, Kashmir and Central India States. The rate of expansion in the States was also higher than in British India.

Uneven Distribution of Industrial Workers

In 1921 as well as in 1939, observes the memorandum, not only was industry unevenly distributed absolutely but also in relation to the distribution of population. The most conspicuous examples were Bengal and Bombay which, with 15 and 5 per cent. of the population respectively contained 29 and 23 per cent. of the total number of industrial workers in the latter year. All other provinces except the smaller areas of Baluchistan, Ajmer-Merwara, Delhi and Coorg possessed smaller shares of the industrial population than would be justified on the basis of their shares in the total population. But the dispersal trend already referred to, the memorandum explains, was in operation in Bengal and Bombay during the years herein mentioned. During these years, while the share of Bengal in the total number of industrial workers declined from 35 to 29 per cent. and that of Bombay (including Sind) from 25 to 24 per cent., Madras increased its share from 8 to 10 per cent., U.P. from 6 to 8 per cent. and Punjab from 3 to 4 per cent.

State and Industrial Location

What should be the policy of the State in regard to industrial location?

The memorandum enunciates a twofold objective of national policy; a planned development of industrial towns and a more even distribution of industry as between regions in order to secure a balanced development of the country as a whole. During the last two decades, the population of most of the industrial towns in India has increased by leaps and bounds and the memorandum states that if India's industrialization is to be accompanied by a further concentration in such towns, the benefits resulting from industrialization will be largely nullified by the tremendous social cost which the nation will incur in the form of slums, disease, congestion, accidents and a general deterioration of mental and physical health. Direct State control may also be necessary to prevent an excessive concentration of industry and population in vulnerable areas.

With regard to the second objective, the memorandum makes it clear that in a country like India it will be extremely dangerous for the State to arrogate to itself the right to determine the location of individual undertakings. The successful conduct of industry from the business point of view is of primary importance if India is to achieve the desired industrial progress. At the same time, considerable stress has been laid on the need for taking direct measures for encouraging the industrial progress of backward areas, e.g., the development of internal communications and power resources, the creation of suitable financial institutions for mobilizing the capital resources in such areas and special assistance to the particular industries suited to such areas. The memorandum gives a detailed account of the work done by the Special Areas Commissioners in Great Britain and advocates similar measures for encouraging the dispersal of industry into the countryside.

The memorandum pleads for a proper co-ordination between house-building and road-building on the one hand and industrial development on the other. " In the absence of proper planning in this respect," it states, " we may discover when it is too late (as other countries, e.g., Great Britain have done) that a large part of our investments in housing and roads could have been turned to a much better account if it had been duly co-ordinated with our programme of industrial development." While it deprecates the further growth of some of the existing towns, it makes out a plea for increased urbanisation of the population through a planned dispersal of industrial activity, on the ground that it will be impracticable to provide many of the modern services and amenities on an efficient scale except in towns of an optimum size. " As an instrument of urbanisation, therefore, dispersal of industry can be the starting point of a great deal of social and material improvement in the country."

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Hours of Work and Output*

Enquiry by the Industrial Health Research Board

A REPORT entitled " A Study of Variations in Output " has recently been published by the Industrial Health Research Board of the Medical Research Council in United Kingdom.

In a previous inquiry by the Board it was revealed that except as a temporary emergency measure, working hours in manual operations involving a fair amount of physical effort should not exceed 60-65 per week for men and 55-60 for women; longer hours will in time result in reduction of output and increase of lost time and of spoiled work. In the latter part of 1942 the weekly hours of work were reduced in several factories engaged in war production; it was thought that the change, though in some cases very small, might have a measurable effect on output, and the present investigation was designed to ascertain whether, and to what extent, such an effect occurred.

The investigation, which was carried out in seven factories, was chiefly concerned with women workers. The extent of the reduction in hours varied widely at the factories concerned, but in most cases it was between 3 and 8 per cent. Twenty-one groups of workers, covering nearly 4,000 individuals, were studied, and the investigation showed that on an average hourly output was 4.1 per cent. higher, in the twelve weeks following the reduction in hours of work, than it was before the change. In the case of five groups the increase in the hourly rate of output after the change ranged from about 11 to 21 per cent., and only in six out of the twenty-one groups was there a decrease in the rate of output following the reduction in hours.

It was found, however, that although the factories to be studied and the operations to be measured were selected most carefully in order to avoid as far as possible external influences, many other factors, operating simultaneously with the reduction in hours, tended to obscure the effects of the latter on output. The most important of these factors were changes in the type or design of the product; mechanical breakdowns and variability in the material which had to be worked; flow of working material; technical improvements in the design of the machines used; changes in the general lay-out of the work; and personal factors, such as dissatisfaction with the method or rate of payment and occasional friction between the management and the workers. In only three of the groups studied was it possible to infer with some degree of certainty that the hourly output increased as the result of the shorter hours of work; even then the position was complicated in two cases by the incidence of the annual holiday.

Despite the difficulties encountered, the Report suggests that shortening of a working week may directly result in increased output, but adds that this effect may be relatively small. There is, moreover, some indication that shorter working hours lead to a decrease in absence from work.

Some information was also obtained as to output and absence on different shifts. On the two-shifts system there was practically no difference in output between night and day work. On the three-shift system there were indications that output was likely to be highest on the afternoon shift and lowest on the morning shift ; the differences, however, were not large. Absence was found, on the average, to be appreciably higher among two groups of women employed on the three-shift system than among five groups of women on the two-shift system.

The results obtained in this and the previous investigation suggest that, of all the factors studied, technical improvements and reorganization are the most likely to lead to an increasingly high and steady level of efficiency. In conclusion, the Report emphasizes the importance of relating the design and operation of machines to human capacities, if the greatest efficiency is to be attained ; in other words machines should be made for men, not men forcibly adapted to machines.—*Indian Labour Gazette.*

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* From the *Ministry of Labour Gazette*, London, July 1944.

Post-war Industrial Development

Future of India's Trade and Commerce

Government of India's Plans

THE following extracts from the Second Report of the Reconstruction Committee of the Viceroy's Executive Council, released last month, will be read with interest:—

If industrialization is to be one of the major aims of economic policy, a steep and even spectacular increase in India's import trade would be inevitable in the post-war era. Although India's capacity to pay for the imports has been greatly strengthened by the growing accumulation of sterling balances and by the reduction of the external debt, the financing of foreign purchases will still entail the maintenance of the export trade at the highest possible level. Moreover, a higher level of trade and commerce would help to increase the wealth and purchasing power and to reduce the incidence of unemployment. But international trade is not unilateral, and no country can lay down a commercial policy for itself in isolation from others. Although it would not be possible to bring the determination of a post-war trade and commercial policy for India to the stage of finality before the framework of the new order contemplated by the United Nations has been fashioned, an endeavour should be made to determine provisionally what policy is best suited to Indian conditions and interests.

Export Policy

As far as possible, export of raw materials should be replaced by export of semi or fully-manufactured goods. Undue dependence on a particular market for the disposal of a particular class or classes of goods, should be avoided, but increased attention should be paid to the development of Eastern markets. Standards of quality for export goods should be laid down and rigorously enforced and encouragement should be given to the formation of larger export units and to action directed towards an improvement in existing trade methods. State-owned organizations should be set up at the appropriate time for the purpose of trading with State-trading countries or in commodities produced or manufactured by State-owned enterprises.

Import Policy

Subject to what is stated in the succeeding paragraphs, it would be of considerable importance to avoid undue dependence on particular import markets and to consider whether action should not be taken to check the growing tendency for companies domiciled abroad to establish branches or subsidiaries in India for purposes of both import and internal distribution in preference to employing Indian or other established agency houses.

Future of Trade Controls

Export and import controls owe their origin to war-time conditions which include economic warfare, supply and availability considerations, difficult currency and shipping. These conditions, or secondary manifestations of them, are bound to persist for some period after the war which may be estimated at about three years. During this period, the present controls should be maintained with greater or lesser severity. But, it is clear that the general trend of international opinion is towards the complete abolition of these controls in all countries at the end of this period. To continue the controls when the present abnormal conditions have disappeared would not be easy and might invite reprisals from other countries; but that should not blind us to the fact that if any comprehensive scheme of industrial development is undertaken in the post-war period, some form of trade control, particularly on imports, will be found inevitable.

It would be necessary to adjust war-time controls in sufficient time to ensure that—(*a*) orders could be placed for the import of capital and consumer goods from overseas and that the necessary priority of shipping could be obtained for the goods urgently required; (*b*) contacts, and possibly contracts, are made with possible purchasers overseas to ensure the retention of pre-war markets and the creation of new ones; (*c*) the necessary foreign exchange is made available to finance imports.

Tariff Policy—Export Duties

India's policy in regard to the imposition of export duties should continue to be guided by the following recommendations:—

(*a*) Export duties should not be imposed for the purpose of protecting industries.

(*b*) Export duties for revenue purposes should be employed sparingly and with great caution; they should be imposed only on articles in which India has a monopoly or a semi-monopoly; and in every case the duties should be moderate.

(*c*) There is no objection to the imposition of small export cesses, the proceeds of which do not go into general revenues but are devoted solely to the improvement of industries including agriculture on which they are based.

Tariff Policy—Import Duties

The revenue tariff imposes a relatively moderate uniform rate of duties on all commodities subject to the levy of a much higher duty on particular articles, mainly of the luxury type, and to exemption from duty or admission at low rates of other articles where the national interests require such concessions. This is a policy which has stood the test of time and might well be followed in the post-war period, though the actual content of the tariff schedules should be subject to review from time to time. One of the weaknesses of the fiscal system has been the extent to which Central revenues had been dependent on customs duties. The present trend towards the enlargement of the scope of direct taxation and excise duties is a wholesome development which should be further encouraged in the post-war period.

Protective duties are imposed in pursuance of the accepted policy of protection. The principles and working of this policy must form the subject of a detailed investigation. Meanwhile, the provisional view is that the economic interests of the country would be best served by the continuance of a policy of protection subject, however, to a liberalization of the principles governing the selection of industries and of the procedure for the initiation and conduct of investigations into claims to protection. The grant of protection would not be confined to existing industries and investigations about the necessity for granting protection to industries yet to be established would be made.

While subsidies and bounties would be unsuitable for countries like India with limited revenue resources and might involve regressive taxation, they may have to be granted as a special measure in some cases.

The resuscitation of the Tariff Board should have first claim on the attention of Government as soon as normal competitive conditions are beginning to be restored, but before that stage is reached provisional decisions should be made as to the status, functions and the period of appointment of the future Board.

Treaty Policy

The ultra-cautious and conservative policy of "do not enter into a trade agreement unless you *must*" should give place to a progressive policy actuated by an anxiety to enter into trade agreements whenever there appears a prospect of a commercial advantage being gained for India. In particular, if the proposals sponsored by the leading members of the United Nations for a multilateral convention covering the principal aspects of commercial policy materialize, we may adhere to such a convention, provided our vital interests are safeguarded. If no such convention is accepted internationally, or, if accepted, to the extent permitted by it, we should endeavour to conclude commercial treaties or bilateral trade agreements on a most favoured nation or other suitable basis with our principal foreign customers or suppliers. At the same time, consideration should be given to the difficulties which have militated against India's adhesion to certain international conventions without awkward reservations, such as the position of Indian States and the treatment of claims to national, or most-favoured-nation, treatment with respect to internal duties levied for the benefit of local authorities.

Industrial Development

The following paragraphs deal with the methods by which it is proposed to foster planned industrial development in India.

For the direction of planning an Industrial Adviser to the Government of India has been appointed. He will be assisted by a number of Deputy or Assistant Industrial Advisers. It is intended to set up a representative Industries Committee from among the foremost industrialists in India, together with representatives of Provinces and States. This Committee will be consulted from time to time on questions of policy pertaining to industrial development. For the actual development work, panels consisting of one or two industrialists concerned with the particular industry, or group of industries, and assisted by experts and an officer from the Planning and Development Department, will be formed. Side by side with this, the Provinces and States are also being advised to set up industries committees of their own so as to see that their own special needs are not lost sight of. The recommendations of the industrial panels would be co-ordinated with those of the Provincial and States Committees before they are considered by the Government of India. This should not prevent the Provinces from going ahead with such schemes of industrial development as may be ready. Such proposals will be examined by the Government of India on their merits from the point of view of any controls that may be required and any assistance that may be desired.

In order to promote Indian industrial development and also to provide first-hand up-to-date information of what is happening in other countries it is proposed to arrange visits by leading Indian industrialists to Great Britain and if possible to U.S.A., and to give them all facilities possible under present circumstances to make contacts, exchange ideas and discuss mutual arrangements for implementing post-war plans. Arrangements are under way for the first group of certain well-known industrialists to leave as soon as they are ready.

Besides organized industry contemplated above the development of small-scale manufacturers and of cottage and bazaar industries will also be taken up. Panels for the development of small-scale industries, particularly those which have grown up during the war, are also being formed in the Supply Department. The question of marrying cottage production with organized industry, as has been successfully done in Japan, is a possibility, but without the horrors of exploitation that the ruthless capitalist and military creed of that country brought into being. This work is especially the field of Provincial and State Governments and efforts will be made to give them every assistance and to work in the closest co-operation with them.

Another form of industry that requires planning is that connected with the processing of natural products and minerals. These may involve only the preliminary processes or be developed so as to carry right through to the finished product. The Agricultural, Forestry and Fisheries Departments, and the Geological Survey, combined with the Board of Scientific and Industrial Research, will be able to render great assistance in promoting development in this direction.

As far as it can be seen at present planning for post-war development falls chronologically into two different phases: (i) planning for the conversion from war to peace production and for ensuring the continued operation on peace-time work of plants installed for munitions production, and (ii) long-term planning for the industrial development of India.

Regarding the first, it is very essential that plans be prepared immediately to turn over from war to peace; otherwise widespread unemployment and unrest will result as well as an unpardonable wastage of industrial potential. With this problem is also involved the question of rehabilitation of industry and the making good of war arrears in plant repairs and replacements. In order to prepare the ground for this work it is necessary to have as complete a picture as possible of Indian industries as they are to-day and of the position in which they are likely to find themselves at the end of the war. For this purpose a questionnaire was issued to the industry as far back as November last. The response so far has been poor ; attempts are, however, being made to expedite the replies to this questionnaire as well as to collect this information by other means.

In the same connection, i.e., rehabilitation, should be considered the question of any expansion that existing factories may be contemplating immediately on the cessation of hostilities. Some part of such expansion may fall under the purview of the long-term plan but most of it will be the legitimate extension which would have proceeded normally but for the war. There is bound to be competition for such extensions as soon as hostilities cease and it is necessary to plan with this contingency in view. To this end a questionnaire was issued last October asking Industry to report its capital goods (machinery) requirements. Response here too has been poor.

A special problem arises in connection with the Government-owned munition, food, clothing and other factories. One alternative would be to hand them over to private industrialists on suitable terms reserving only such as are required for the production of lethal weapons and special equipment. This might involve agreement to the maintenance of certain special machinery that might be required for war production.

Another method would be for Government to convert these factories to civil production under Government management, e.g., for machine tools, radio sets, scientific instruments, aircraft parts and maintenance, etc., whilst retaining their war potential. There is much to be said for this method provided the factories are managed on commercial lines. They might become valuable training grounds for highly skilled technicians and also produce goods which at this stage could hardly be profitably produced by private firms. They might also undertake the production of the more specialized equipment required by the Railways and P. and T. Department.

It may be noted that after the last war Australia procured valuable equipment at a low price from surplus munition factories in the U.K. and thus laid the foundations of her present munitions industry. It is possible that India might do the same especially as it is believed there is likely to be a surplus of machine tools in the U.K. as well as of specialized equipment for making munitions.

As regards the second phase, namely, long-term planning, we have the All-India and Provincial Industrial Committees and the Industrial Panels through whom the Plan will be prepared.

The imposition of controls will require legislation with special reference to the licensing of industries, control of imports of capital goods and a control of capital issues. The question whether agreement can be reached with States as to the application of any of these controls will also have to be reviewed. These measures will have to be considered in conjunction with the Governments of Great Britain and the U.S.A. and it is to be anticipated that if they maintain any control over the manufacture and exports of capital goods, they will be ready to accept the recommendations of the Government of India in respect of priorities. It will also be necessary to take steps to ensure the grading and guarantee of the quality of Indian products. The building up of India as a great industrial country may be seriously jeopardized by questionable methods, unreliable samples or inferior workmanship on the part of a few manufacturers and it may be necessary to devise machinery to guard against this and to ensure standardization of grades and uniformity of samples and manufactures.

The examination and review of industrial development will have to decide the following questions of policy:—

(*a*) Whether the development is desirable and in what location.

(*b*) What assistance, if any, is required from Government in the form of tariffs, finance, etc.

(*c*) What agency should undertake it.

(*d*) What priority should be given to the import of the capital goods required.

(*e*) Whether suitable labour is available and whether suitable arrangements have been made for housing.

(*f*) Whether adequate technical staff is available or can be obtained.

(*g*) Whether coal and/or electric power are easily available.

(*h*) Whether adequate transportation facilities can be provided.

(*i*) Proximity to markets or to ports for export.

Industrial development cannot proceed according to artificial governmental boundaries; it must depend upon the geography or raw materials, power and markets. Planning will, therefore, have to be regional to a certain extent and the recommendations of Provincial and State authorities will have to be co-ordinated with the practical advice of industry. Development will, therefore, not only be a question of assistance by Government but also of direction, co-ordination and control.

The pace of development is likely to be governed more by the availability of imported machinery and technical staff than by considerations of finance. These are both matters in which Government assistance may be necessary.

The most serious difficulty facing the expansion of industry will be the dearth of technical staff, especially for the higher technical and managerial posts. Efforts are being made to arrange for the despatch of promising young men to the U.K. for this type of training. It may be necessary to obtain a quota for Indian students at the Universities and technical colleges in the U.K. in view of the very large influx of British students expected at the end of the war.

The major industries will require examination in detail under the following heads:

(*a*) Technical—to determine if the industry can be efficiently established in India in the proposed location, or where it should be located.

(*b*) Scope—to decide on the range and variety of articles to be produced.

(*c*) Commercial—to decide if markets are available in India or overseas and what competition is to be anticipated.

(*d*) Strategic—to settle whether the industry is necessary on Defence grounds or is essential to economic development.

Advantages of Larger Package and Bigger Ring Diameter

Suggestions for Post-war Development

BY TRILOKI NATH SHARMA

(*Specially Contributed*)

MOST of the textile mills in this country have got at present ring frames of 5″ lift and 1⅝″ ring diameter for spinning coarse, medium and fine counts.

Since the length of coarser yarn on 5″ lift and 1⅝″ ring diameter bobbin is comparatively less, it is neither economical nor convenient to employ ring frames with smaller lift and smaller ring diameter for the spinning of coarser yarn.

The following table shows approximately the length of yarn of different counts on various lifts and ring diameter bobbin.

Lift	Ring dia.	Length of yarn in yards							
		10s	12s	14s	16s	18s	20s	22s	24s
5″ ..	1⅝″	525	630	735	840	945	1,050	1,155	1,260
5″ ..	1¾″	575	690	805	920	1,035	1,150	1,265	1,380
5″ ..	2″	646	775	904	1,034	1,163	1,292	1,421	1,550
6″ ..	1⅝″	630	756	882	1,008	1,134	1,260	1,386	1,512
6″ ..	1¾″	690	828	966	1,104	1,242	1,380	1,518	1,656
6″ ..	2″	775	930	1,085	1,240	1,395	1,550	1,705	1,860
7″ ..	1⅝″	735	882	1,029	1,176	1,323	1,470	1,617	1,769
7″ ..	1¾″	805	966	1,127	1,288	1,449	1,610	1,771	1,932
7″ ..	2″	904	1,085	1,266	1,446	1,627	1,808	1,989	2,170
8″ ..	1⅝″	840	1,008	1,176	1,344	1,512	1,680	1,848	2,016
8″ ..	1¾″	920	1,104	1,288	1,472	1,656	1,840	2,024	2,208
8″ ..	2″	1,033	1,240	1,446	1,653	1.859	2,056	2,273	2,480
9″ ..	1⅝″	945	1,134	1,323	1,512	1,701	1,890	2,079	2,268
9″ ..	1¾″	1,035	1,242	1,449	1,656	1,863	2,070	2,277	2,484
9″ ..	2″	1,163	1,396	1,628	1,861	2,093	2,326	2.559	2,792

Let us examine the advantages and disadvantages in two similar mills, one equipped with ring frames with 5″ lift, and 1⅝″ ring diameter and the other having spinning frames of 7″ lift, 2″ ring diameter, all other details remaining entirely identical in the two mills.

Particulars	Mill No. 1.	Mill No. 2.
No. of ring frames	40	40
No. of spindles per frame	352	352
Lift	5″	7″
Diameter of ring	1⅝″	2″
Revolution per minute of front roller	182	182
Diameter of front roller	⅞″	⅞″
Spindle speed	7,500	7,500
Counts spun	10s	10s
Working hours	9	9
Time taken to complete one set	38 mts.	65 mts.
Number of doffs in 9 hours per frame	14.6	8.4
Number of doffs in 9 hours in 40 frames	584	336
Weight of yarn in one set in lbs.	22	38
Time taken to restart the frame after doffing	2 mts.	2 mts.
Actual doffs in 9 hours per frame	14.0	8.0
Number of doffs in 40 frames (actual)	547	325
Production in 9 hours per frame	301 lbs.	309 lbs.
Production of 40 frames in 9 hours	12,040 lbs.	12,350 lbs.
Work done by a doffer in 9 hours	12 doffs.	12 doffs.
Doffers required in 9 hours	46	27
Number of empty pirns required in 9 hours	1,92,544	1,14,400

From the above data it is clear that:—

1. No. 2 Mill will get about 300 lbs. extra production in 9 hours.

2. No. 2 Mill will require 27 doffers as against 46 required in No. 1 Mill.

3. No. 2 Mill will require 1,14,400 ring bobbins to work 40 ring frames, as against 1,92,544 required to work the same number of rings in Mill No. 1.

4. Since the number of doffs is less in Mill No. 2, the breakage will be about 22 per cent. less, as most of the breakages of ends occurs when the machine is restarted after doffing.

5. The tenter in Mill No. 2 will have less work and during the time thus saved, he can look after more spindles.

So far we have discussed the advantages anticipated in spinning in a mill where the ring frames are installed with longer lift and bigger ring diameter. Now let us see how it affects the subsequent process, such as winding, warping, sizing and weaving.

Most of the work of a winder is to replace ring bobbins, from which the yarn has either run out or is broken in the process of transferring the yarn to the warper bobbins, apart from taking out the slubs, snarls, kinks and weak places. The operator makes suitable knots as and when required. While by improving the quality of the yarn we can minimize the yarn breakages, we cannot decrease the changing of bobbins when run out.

Let us see how the longer lift and bigger ring diameter influence the working of the winding department. The following table shows a comparison of longer lift and bigger diameter and small lift and small diameter performances.

Particulars	Mill 1	Mill 2
	5″ lift, 1⅝″ ring dia.	7″ lift, 2″ ring dia.
Number of spindles a winder can manage	15	24
Number of ring bobbins required to fill one warper bobbin.	18	11
Number of knots in one warper bobbin	17	10
Number of winders required to work one winding frame of 300 spindles	20	13
Count of yarn worked ..	10s	10s

From the above table we find that it will be economical and convenient to have ring bobbins of longer lift and bigger diameter. The cost of production will be low, apart from the ease in operation which the winding department will have.

Although there seems to be no direct relation between warping and ring bobbins, and although the change in any shape or form in the size of bobbin should not have any effect on this department, we should examine if there is any influence, good or evil, with warper beam prepared from bigger ring bobbin.

Particulars	Mill 1	Mill 2
	Lift 5″, Ring dia. 1⅝″	Lift 7″, Ring dia. 2″
Counts of yarn	10s	10s
Number of ends	450	450
Length of yarn on warper beams in yards	6,000	6,000
Number of knots in the beam.	5,143	2,983

It is seen from above table that the beams prepared in No. 2 Mill will have very few knots as compared with the beams prepared in No. 1 Mill.

These knots, especially in coarser counts, give trouble in the weaving shed, keep down efficiency and increase the damage percentage. The cloth with fewer knots is better in every respect.

So far, we have shown the advantages of the longer lift and bigger size of rings. Now let us see its disadvantages, if any, and whether ways and means can be adopted to overcome the difficulties.

Difficulty is encountered on the spinning frame, due to the limitation of the ring traveller speed, as, for example, the surface speed of the traveller, when the spindles having a ring of 1⅝″ in diameter revolve at 12,000 r.p.m., is 1,702 yards per minute. When the diameter is changed to 2″ the spindles are worked at a lower speed of 9,775 r.p.m. While the surface speed of the traveller in both the cases remains the same, the spindle speed in the latter case is reduced considerably. The reduction in spindle speed means decrease in production.

If the spindle speed is increased, the travellers will begin to burn and fly off. It will not be possible for a minder to look after his spindles. 9,750 r.p.m. is the limit of spindle speed, which it is not possible to exceed when the diameter of ring is 2″.

We have taken 12,000 r.p.m. spindle speed, which is rather on the higher side. Generally it is rarely kept, although efforts are being made by machine manufacturers to make the ring spindle work at higher speeds.

There are many coarse counts, such as 10s to 16s, where the spindle speed is kept from 7,500 to 9,500 r.p.m. irrespective of the ring diameter. Therefore, 2″ ring diameter will work on the above counts without any difficulty.

Finer counts, where the spindle speed is higher, will not work with 2″ ring diameter. It is necessary, therefore, to change this. On longer lift frames, the tension on the yarn is increased and causes increased breakages. There are many ways which help to reduce the tension and remove other defects such as ballooning, especially when the machine is started with a fresh set. Machine manufacturers are supplying special types of separators, rising and falling lappets, etc., to keep down the number of breakages.

All these small changes may not be required, if the rings have got variable speed motors or arrangements to start the ring frames at slow speed when the frame is started. The speed can, however, increase automatically, as soon as the bottom is formed.

A reputed firm have so designed their ring frames that the spindle rail moves up and down in the place of ring rail. With this arrangement, it will be possible to employ ring frames of higher lifts in conjunction with variable speed drive.

It will be possible to spin medium counts without any difficulty.

Indian Trade Commissioners Abroad

Important Role in Post-war Period

DURING the present war emergency, Indian Trade Commissioners are performing certain functions outside their normal duties in the territories under their jurisdiction where there is no other suitable officer to represent the Government of India. For example their services have been utilized in arranging for the supply of raw materials required for Defence Services and for recruitment of specialists for military services and nurses for the Indian Nursing Services (Temporary).

The first Indian Trade Commissioner was appointed in the U.K. in 1917 ; but it was not until 1930 that definite steps were taken to set up Trade Commissioners' posts in countries in which the fostering of India's trade was a matter of some importance. At the outbreak of the war, there were Trade Commissioners in London, New York, Alexandria, Mombasa, Hamburg, Milan and Osaka ; but the last three offices had to be closed down on the outbreak of hostilities. New posts of Trade Commissioners have since been created at Sydney, Toronto, Buenos Aires and Persia.

Indian Trade Commissioners will be called upon to play an important part in fostering and developing India's trade in the post-war period. During normal times, their principal duties are to answer trade inquiries which are directed to the development of markets for Indian goods, to furnish commercial information directed to the development of Indian export trade required by Government Departments, to report local developments likely to affect Indian trade, to organize exhibits of Indian goods at local exhibitions and fairs, to represent the possibilities of Indian trade by means of lectures, display of films and other suitable methods and to take such other steps as will promote the development of India's foreign trade.

These functions could not be performed during the war period, for obvious reasons, principally due to war-time restrictions on imports and exports. But with the end of the war these and other duties of the Trade Commissioners will assume their usual peace-time importance, which will be far greater than in the pre-war years. As there will be a variety of new and intricate problems to be tackled regarding India's foreign trade in the coming years, the Trade Commissioners may be expected to render in the post-war period a very useful service in fostering and developing India's export trade in a manner which will be conducive to the general economic and industrial development of the country.

Cottage Industries in the Bombay Province

Their Place in the Rural Uplift Plan

(*Contributed*)

COUNTRIES depending for their subsistence mainly on agriculture are proverbially poor, and India being what she is, is no exception. The pressure of population on soil and the consequent low standard of income is the root of all evils associated with village life, such as illiteracy, ill-health, improper nourishment, high death-rate, enforced idleness for the greater part of the year, want of minimum comforts by way of housing and clothing. Any plan intended to remedy these evils must particularly concentrate on improving the *per capita* income, which alone can ensure to every man, woman and child two meals, shelter, clothing and such other amenities as are necessary for a just and reasonable existence.

Agriculture is the primary occupation of the people. Therefore, the success of any rural uplift plan must depend upon:—

(i) Improving agriculture and making it a paying proposition.

(ii) Gainful occupation of a subsidiary nature to agriculture for the under-employed (in most cases agriculture is only seasonal,

(iii) Whole-time small-scale industries to give steady employment to surplus labour.

Agriculture alone cannot hope to give full employment to our teeming millions. Thus the value of subsidiary cottage occupation and small-scale industries in the rural economy towards improving work, wage and wealth cannot be denied. Cottage industries flourished in India not long ago and gave employment to a large percentage of its population. Its products not only met the demands of home markets, but were exported to foreign countries where they were greatly appreciated. But the dumping of cheap imported goods, competition from machine-made products of organized industries and lack of assistance from Government and the general public ruined these industries, with the result that the healthy balance between agriculture and industry was disturbed to the detriment of the villager.

Large-scale industries of the following type are essential, however:—Mining and metallurgy, chemical industries such as fertilizers, heavy chemicals, dyestuff, rayon, fine chemicals and drugs, etc.

Apart from the virtue of the direct employment which these industries provide, they render possible and greatly facilitate the development of all kinds of small-scale and cottage industries, the finished product from the former class functioning as raw material of the latter or *vice versa.* In this connection, mention may be made of Japan and Germany, where a considerable proportion of the industrial production comes from factories employing a very small number of operatives.

Cause of Decline of Cottage Industries

It is a curious fact that in spite of numerous handicaps and practically no organized help from any quarter, some of the cottage industries have continued to linger. A living example is the handloom weaving industry which in spite of its languid condition, gives the largest employment, next only to agriculture. The important handicaps adversely affecting cottage industries in general are:—

(i) Difficulty of obtaining raw materials in sufficient quantities regularly and at a fair price. (It must be observed that organized large-scale industries purchase their entire requirements of raw materials for the year during the season.)

(ii) Lack of facilities for improvement of manufacturing technique, so that quality, design and standard could be improved to suit the changing tastes and fashions.

(iii) Lack of capital (exploitation by money-lenders).

(iv) Absence of facilities for publicity and marketing (exploitation by middlemen).

(v) Taxation.

(vi) Conservatism, lack of initiative, etc.

But the cessation of imports and huge demands to meet civil and military requirements during 1940, however, offered them opportunity to prosper. The Government had to look to these industries for the supply of blankets, *kumblies*, tentage, camouflage nets, hats, leather and rubber goods, etc. The Provincial Governments were directed to give all possible assistance, such as supply of raw material, financial help and technical guidance. But the Government of India may not show the same concern for these industries after the war. With the return of competition in the post-war period the future of cottage industries can be anything but bright. Their resuscitation and progress demand a thorough survey, planning and organization. The Bombay Government appear to have given little attention to cottage industries in " Planning for the Future of Bombay's Countryside."

Cottage Industries

In considering the question of new occupations or giving encouragement to existing ones, the aim should be to select industries (i) for which raw materials exist or can be had at sufficiently low rates, and (ii) occupations for the practice of which certain areas are most suitable from the viewpoint of meeting the peculiar needs of the local market, availability of power, suitable labour and facility for quick and cheap transport.

The raw materials in Bombay Province fall under five heads:—Power resources; agricultural products; animal products; forest products; and marine products.

To review the position under some of these five heads.

Power Resources

We have no coal in our province. But fortunately, we have huge resources for hydro-electric power which are more than a substitute for coal as motive power. Except for the hydro-electric power generated in the vicinity of Bombay, these resources have remained untapped. We have observed how as a result of supply of cheap electric power in Mysore, Madras and Travancore cottage industries have sprung up, tapping the local known and as yet unknown resources. It is a matter for gratification that the Bombay Government has been making the necessary survey and effort to put up a grid system which will facilitate the supply of power to rural areas.

Agricultural Products

The important food crops are *jowar*, *bajra*, wheat, rice, sugarcane. Some of the industries connected with these are fairly developed, such as rice milling, paddy boiling; grinding of cereals; manufacture of jaggery, etc.

Tapioca.—In the Konkan strip where the rainfall is fairly abundant, tapioca can be grown on uplands (lands not suitable for paddy). A visitor to Malabar can realise how this root has saved millions from starvation. If not required as foodstuff the Travancore villagers convert it into starch—a valuable product for textile sizing and finishing. It was the Travancore tapioca starch which sustained the textile industry in the years 1940, 1941 and 1942. But an embargo was later imposed as the rice scarcity had become acute. Tapioca is a hardy plant, resistant to draught, pests and parasites and requires little attention in cultivating it. The Agriculture Department must take the lead in introducing this valuable dual-purpose crop in this province.

Cotton.—Carding, hand spinning and handloom weaving. The A.I.S.A. has been doing good work in the promotion of cottage industry, but still much remains to be done.

The handloom weaving industry of the province and the ancillary operations connected with it rank in importance and magnitude only next to agriculture. This industry from the standpoint of well-being of the rural population plays a conspicuous part as there are few occupations so remunerative as weaving to absorb the population not engaged in agriculture or to keep them occupied when there is no work in the fields. The Central Government realizing the need for assisting this industry, appointed some time ago a committee to go into the details of hardships of handloom workers and recommend remedies for their removal.

Fibres.—The important fibres are agave, ambadi, hemp, sisal and coir. The industries connected with these are ropes, cordage, matting, nets, etc. There should be great possibilities for the development of these industries. Travancore particularly has organized these industries on sound lines, its products such as coir matting and ropes are well known throughout the country.

Animal Products

Sheep.—Wool spinning and weaving of blankets and *kumblis*. The quality of wool in the province is poor. Interesting experiments towards improvement of breed of sheep to obtain superior quality and larger yield have been undertaken in several parts of India and this province should undertake improvement on their lines.

Sericulture

This industry, subsidiary to agriculture, has made good progress in Mysore, Kashmir, Bengal and Madras. Mr. Ramnath, a sericulturist from Mysore who surveyed the Bombay Province to report its suitability for growing mulberry and rearing silk-worms has indicated that great potentialities exist in certain areas for the development of sericulture and the Bombay Government acting on his recommendations, has opened a demonstration farm near Belgaum.

Recommendations

The recommendations of the Bombay Industrial and Economic Inquiry Committee should be considered and implemented if small-scale industries are to be placed on sound footing. Some of their important recommendations are:—

(i) Establishment of small-scale industries bank.
(ii) Comprehensive survey of resources with the object of starting new occupations and developing existing ones.
(iii) Technical aid and research.
(iv) Demonstration parties.
(v) Exhibitions, museums and sales depot to popularize cottage industries products.
(vi) Co-operative buying and selling.
(vi) Stores purchase policy to be so framed as to give preference to the products of local industries.

Conclusion

The growing pressure upon the land renders the development of small-scale and cottage industries imperative to the economic future of this province. Workers and artisans can help themselves to some extent through self-help and co-operative methods. But no permanent results can be achieved without the active help of the Government. The Government should, therefore, assign an important place for the problem of small-scale and cottage industries in their post-war rural uplift plan.

Sericulture in Travancore

THE Agricultural and Industrial Departments are engaged in the revival of the sericultural industry in Travancore. Experimental plantations of mulberry have been started at Pangode, in the premises of the Pattom and Kowdiar Palaces and also in the area adjoining the Reformatory and the Central Prison.

Experimental rearing of silk-worms was started in 1944 with 100 layings of seed eggs obtained from Coimbatore. 67½ lbs. of raw cocoons of high quality were produced, the output being comparable with those obtaining in Mysore and Coimbatore.

According to expert opinion, the soil and climatic conditions in many parts of Travancore are favourable for mulberry cultivation, and there is every possibility of establishing a flourishing sericultural industry in the State in the near future.

What is Nylon?*

TO attempt concisely to answer the question "what is nylon?" is rather like playing the parlour game known as "Animal, Vegetable or Mineral." Textiles may be vegetable like cotton and flax, and the fibres jute, hemp and ramie; or they may be on the animal side such as wool and silk. Nylon is definitely mineral, for in effect it is derived from coal, air and water. All the textile materials consist of long chain molecules, and in many cases science has as yet only a rough idea as to the build-up of these molecules. Nature is an adept in building-up long chain molecules. Man has only been getting down to the job over the last few decades, but already with a good measure of success.

Building-up Long Chains

When an ordinary salt is prepared from an acid and a base, the molecules so formed are usually quite simple ones and are not linked one with the other, but molecules of certain materials may be persuaded, by use of the right conditions, to link together to form a chain, just as it is possible to make a chain out of paper clips. Such a chain is called a polymer. If the molecules link up in a nice straight line and do not, as it were, eat their own tails, the chain is called a linear polymer. In other cases a molecule of one particular material may be made to link up with a molecule of another material, and so on, forming a mixed chain. It is in such manner that many materials coming to the fore to-day are made. If we consider the developments in the manufacture of the various sorts of synthetic rubbers, we can say that what is being done is that long molecules are being built up from small ones. In this way materials are produced which are rubber-like in their properties. These materials are at the present time all called "synthetic rubbers," but this is really a misnomer, for what is happening is that man is building up materials which have a somewhat similar structure to natural rubber, but not identical with it. Man is really manufacturing a variety of rubbers, each of which will have its special application.

In the textile field, man has been trying to emulate the silk-worm for generations. His efforts led first to the invention of what was originally called "artificial silk" and is now known as rayon. A number of artificial silks were made from cellulose, and as they developed it was seen that their acceptance by the public was held back by the word "artificial" which implied something *ersatz*. Accordingly, manufacturers and others coined for these materials the name "rayon" which has been generally accepted in America and, though to a far less degree, in England.

In making rayon man does not build up a long chain molecule, but makes use of the work which Nature has already done. He enters, as it were, at the half-way stage; thus, no matter whether he uses cotton or wood as the basic material he uses the long chains provided by Nature, and merely converts them into a usable form by modifying them under chemical treatment. Similarly, with casein fibres he uses long chains of proteins in milk produced by animals and modifies these to suit his purpose. With the nylons, on the other hand, he does not go to Nature for an already made chain. He builds one up himself. It will be noticed that reference is made to "nylons" themselves because nylon is actually a generic term covering a whole new series of products, possible hundreds in number, all built up from the same type of materials. The technical definition of nylon as adopted by the Patents Office is rather complicated:—

> "Nylon is a generic term for all synthetic fibre-forming polyamides, i.e., organic condensation products which contain a multiplicity of structural units linked in series by amide or thio-amide groupings produced by a process of manufacture in which non-fibre-forming organic substances of lower molecular weight are converted into products of such high molecular weight as to be capable of being formed into filaments which, upon cold drawing, acquire a true fibre structure recognisable by X-ray examination."

Actually, the structure of the nylons is similar to that of the proteins, at any rate to that structure which it is at present thought that proteins possess. Rayon was discovered because man tried to imitate the silk-worm, which can convert cellulose into a protein fibre. Man did not succeed in this and found that what he had done was to convert cellulose into usable form. Coming back to the question: "Animal, Vegetable or Mineral?" rayon is possibly most accurately classed as vegetable, or at best vegetable plus mineral.

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*Press note released for publication by The Imperial Chemical Industries Ltd. in England.

How Nylons are Made

By no means all the nylons that can be made have yet been made. The particular nylon which forms the bulk of the present-day production is actually built up from a dibasic acid and a diamine. The acid is prepared either from phenol or from benzol, while the raw materials for the diamine are phenol or benzol and ammonia. Ammonia is, of course, made synthetically by causing hydrogen from water to unite with nitrogen from the air, while phenol and benzol are both derived from coal. Thus present-day nylon can truly be said to be produced from coal, air and water, no vegetable or animal product being employed.

Having obtained the acid and the diamine, these are combined in the same way that an acid is combined with an alkali to form a salt. This is called nylon salt, and it is an ordinary crystalline powder. The molecules of this salt, although containing a lot of atoms, are still small individual molecules, but when heated under the right conditions, proceed to link up to form long chains. In fact, care is needed to prevent the chains from becoming too long. In other words, molecules must be trimmed to the right length for the particular job in question. At the appropriate time the melted material, now called nylon polymer, is squeezed out and rapidly cooled.

In this form nylon polymer is hard, white and shiny, rather like a piece of flaked-off white enamel or a piece of cuttle-fish. Actually in this form the long chain molecules are all jumbled up together, whereas for use they should be arranged in an orderly fashion. The polymer is accordingly melted and forced through a small hole from which emerges a filament which is again rapidly cooled. The peculiar property of this filament is that it can be drawn out to many times its own length. During this cold drawing process the long chain molecules align themselves and the filament gets stronger all the time. When it has been drawn to a certain length, somewhere between four or seven times the original length, a further change takes place for, instead of being merely extensible, the filament suddenly becomes elastic. Similarly nylon yarn is elastic to a certain degree, and you can readily see why nylon yarn seems to be the ideal yarn for the manufacture of hosiery.

Properties of the Nylon

It is not yet known what properties will be forthcoming from the nylons yet to be discovered or what modifications can be made to the long chains once they have been formed, but there are bound to be many interesting developments, as interesting as they are important, during the course of the next ten years, if not sooner.

The properties of the yarn produced from present-day nylon are:—

(1) For a given denier nylon yarn is very much stronger than any of the other textile materials, including silk; thus nylon yarn has a strength of 6 grams per denier as compared with 3.8 grams per denier for raw silk. Steel has a strength of about 3.3 grams per denier.

(2) In addition to being stronger than silk, nylon yarn is also lighter, having a density of 1.14 compared with raw silk in the range 1.30-1.37 and boiled silk having a density of 1.25.

(3) It has a high melting point of about 480° F.

(4) Nylon yarn and monofil is practically as strong when wet as when dry.

(5) It absorbs but little water and thus dries readily.

(6) It does not burn—just melts.

(7) It is absolutely proof against attack from moth. In other words, Nature apparently realizes its mineral origin, and will have none of it.

(8) An interesting and important property of nylon yarn is that hot water or saturated steam imparts a substantial permanent "set" to nylon yarns and fabrics, i.e., if a nylon yarn or fabric is subjected to hot water or steam during manufacture it tends thereafter to retain the form in which it was during the steam or hot water treatment. Advantage is taken of

this property in making nylon hosiery, with the result that such hosiery, after repeated wear and washing fits the human leg as closely as when new.

Nylon is extremely hard-wearing and this property, together with its strength when wet, has led to the use of what is called nylon monofil as a replacement for bristles. Many people will by now have had experience of the durability of nylon monofil when used for tooth brushes. In the future, of course, these hard-wearing nylon bristles will be utilized in industry for bottle-washing machines, paint brushes, etc., and so on. Again nylon monofil is used as sutures, and there is nylon film and nylon enamels.

Nylon yarn is superior in strength and elasticity to the other textiles and is, in fact, in a class by itself. Nylon is used for purposes other than textiles. One can scarcely imagine a tooth brush, for example, let alone an industrial brush, being made of the usual textile materials.

A few words about the word "nylon" itself. Messrs. du Pont have been very anxious to point out that, apart from their desire to have a word ending with "on" —i.e., in line with cotton and rayon, there is no particular meaning behind the word itself which was chosen from many hundreds of suggestions. The word "nylon" should be spelt with a little "n" and should be used in an adjectival sense —thus, nylon yarn, nylon monofil, nylon sutures, nylon films, etc., except where the chemical itself is intended.

1. Nylon is a generic term just as glass is a generic term and covers products of particular origin just as rayon is a generic term covering yarns derived from cellulose.
2. The long chain molecules necessary for its properties as a textile are entirely built up by man.
3. Nylon polymer is capable of forming nylon yarn which has unique properties among the textiles, and is also capable of forming films, sheets, bristles and sutures.
4. The letters of the word "nylon" have no particular significance and the word should be spelt with a little "n" and not included in inverted commas. The word is not a trade-mark and should be used in an adjectival sense, such as nylon yarn, nylon monofil, nylon sutures, and so on, except where the chemical itself is being referred to.

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Hosiery Industry and the Present War

By K. K. MADAN, *Hosiery Technologist, Cawnpore*

ALTHOUGH the present war has brought a boom to industry in general, the hosiery industry has received a setback and its existence is in jeopardy. The shortage of all sorts of hosiery needles has debarred the manufacturer from making even normal profits. At the present moment many factories are lying idle, some of them are running partially and very few are really working.

The needles, like other essential parts, could easily be manufactured by any enterprising capitalist. All sorts of parts have been made in our country and it is a strange thing that nobody has thought of this line. The available stock has been difficult to procure because of the advent of the black marketeer.

The menace of Japanese competition and dumping was at its climax when war broke out, and the manufacturer and technician in this industry were hoping for a better day as a result of the war, but were disappointed as the needles could not be made in India. The problem became very acute and the condition deteriorated to such an extent that most of the owners had to stop their factories even though the demand for goods grew many times and the profits were very lucrative.

Will any responsible person who has the welfare of this budding industry at heart think of reviving it? With Government's help we can well manage to bring it into line with other industries at a comparatively low cost.

Bombay Government Take Over Yarn Distribution

Other Control Notes and News

THE Government of Bombay have assumed complete control over the distribution of yarn in Bombay Province. In pursuance of this, the Provincial Textile Controller served an order freezing the stocks of yarn with 80 wholesale yarn merchants in Bombay City. These stocks will be distributed by the Provincial Textile Controller directly to the weaving and powerloom associations in the district.

The step was taken to bring under Government control stocks of yarn which had hitherto remained in the black market and beyond the reach of the small-scale handloom and powerloom weavers whose trade was almost paralysed for want of yarn.

Bombay Province requires a minimum of 14,000 bales of yarn a month to feed its handloom and powerloom industry. As the total yarn available for this purpose does not exceed the requirements, and as certain varieties are particularly sought after by the weavers, there is considerable competitive buying in the yarn market as also black market trading. The poorer class of weavers are unable to get any stock, with the result that their trade has been completely crippled. Further, much of the valuable commodity was frittered away in the manufacturing centres.

After several weeks' planning and careful consideration, the Provincial Textile Controller, Mr. J. K. Thakore, prepared a scheme for the distribution of yarn to weavers throughout the province and the machinery for it has been set up. Consumers in the northern division of the province between Viramgam and Surat are to be supplied from Ahmedabad with 2,000 bales of yarn. The rest of the province will be supplied from Bombay and Sholapur.

It is expected that 6,000 bales of yarn will come into the hands of the Provincial Controller as a result of the freezing of the stocks in Bombay.

The details of the new scheme of distribution of cloth, outlined by Mr. K. M. D. Thackersey, Chairman of the Textile Control Board, at the meeting of the Board held in Bombay on Thursday the 25th of January last*, were discussed at a conference of the Provincial Textile Controllers held in Bombay on Tuesday the 13th February 1945 and the following two days. Mr. M. K. Vellodi, Textile Commissioner, presided. The conference was attended by the representatives of the various provinces and of some of the Indian States including Hyderabad (Deccan), Mysore, Baroda and Indore.

The object of the conference was to elicit information on the difficulties of the Provincial Governments and the States in giving effect to the scheme with a view to making minor alterations to suit the convenience of the various administrations.

Registration of Transport Permits

On and from 5th February 1945, all transport permits and applications for the registration of movement of cotton piecegoods and yarn whether against war or standard cloth orders or for civil requirements from Bombay will be accepted for registration at the old G.I.P. Booking Office, Old Hanuman Lane, Mulji Jetha Market, Bombay.

No such applications for movement will be accepted at Shahibagh House, Office of the Textile Commissioner, from the above date.

Cotton Waste

By a notification in a *Gazette of India Extraordinary* dated 31st January 1945, the Government of India have, under powers conferred by sub-rule (5) of rule 75A of the Defence of India Rules, directed all those dealing in cotton waste to declare the stocks of cotton waste in their possession at the end of each calendar month, and at the same time to declare their commitments for the sale as well as for the purchase of cotton waste. The Order also requires them to state their total purchases during the year 1944. The declarations are to reach the office of the Textile Commissioner on or before the 10th of the succeeding month. The statement relative to total purchases of cotton waste during the year 1944 will accompany only the declarations as at 31st January 1945. The types of cotton waste to which this order applies are: (1) cop bottoms, (2) reeling waste (both white and coloured) and (3) sized waste (both grey and coloured), and all other hard waste including mixtures in any proportions.

The order applies to dealers only and not to cotton mills.

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* Please see *Indian Textile Journal*, January 1945, p. 253.

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Disposal of Cloth Stocks

The permission granted to dealers in the Bombay City and suburban area receiving goods directly from a manufacturer (quota holders) to dispose of 20 per cent. of their stocks to persons other than other quota holders or retailers is cancelled and all sales of such cloth by such persons may hereafter be made only in accordance with a written authority granted by the Textile Commissioner.

The Provincial Textile Controller will recommend to the Textile Commissioner to grant licences permitting dealers other than retailers within the Bombay Surplus Area to purchase a specific number of bales of such cloth and the Textile Commissioner will, on such recommendation, grant such authorities enabling such merchants to purchase from the quota holders a specific number of bales.

Printing of Cloth

According to the Bombay Hand Printers Licensing Order, 1944, which came into force in Bombay City and the Bombay Suburban District and certain areas in Ahmedabad District on 24th September 1944, no person other than the holder of a licence issued under the order can order printing of cloth from a licensed hand printer except under a permit issued by the Licensing Authority, which in the case of Bombay City and the Bombay Suburban District is the Provincial Textile Controller, Bombay, says the Public Relations Officer (Rationing).

Members of the public cannot, therefore, place an order for hand printing of cloth with a licensed printer without first obtaining a permit and no licensed printer can accept orders for such printing work without receiving such a permit from the customer.

Such permits can be obtained from the office of the Provincial Textile Controller at Kalachowki, Parel Road, Bombay.

Hand-dyed Cloth Under Control

Hand-dyed cotton cloth was hitherto exempted from the provision of clause 14 of the Cotton Cloth and Yarn (Control) Order, 1943, which prescribes the time limits for the disposal of stocks of cloth and yarn. The Textile Commissioner has decided to withdraw this exemption as from 27th January 1945.

Revised Processing Charges

A notification by the Textile Commissioner prescribing revised bleaching, dyeing, finishing and other processing charges applicable to all processors (other than those who are also manufacturers of the basic cloth or yarn) has been published in the *Gazette of India* dated 13th January 1945. The notification provides that the charges notified shall be applicable to all cloth and yarn to which the Cotton Cloth and Yarn (Control) Order applies. Copies of the revised schedule of charges have been issued to all mills and processors.

Cloth Export from India: Restrictions Tightened Up

The Government of India have decided to tighten up the restrictions on export of cloth in which the count of warp yarn is 36s or finer, and such cloth will hereafter be allowed to be exported only to the extent of a very small percentage of the production. A Press Note which contains this says that the Government decided upon the step in view of the shortage of supplies of fine cloth available for the civil market.

Shipments of fine cloth against export licences for cotton piecegoods already issued by Export Trade Controllers will only be allowed in cases where the cloth is proved to have been acquired for export against such licences before the date of this announcement.

Distribution of Cotton Seed: Zonal Scheme for Madras Province

A Press Note issued by the Board of Revenue (Civil Supplies Department), Madras, says:—

The Province of Madras is heavily deficit in cotton seed. With a view to conserving the available supplies, the Government issued orders in November 1943 prohibiting the export of cotton seed outside the Province, and to make up the deficit, arrangements are being made for imports from the Central Provinces and other places outside this Province. In order to prevent unnecessary cross movement, a zonal scheme for distribution of the seed within the Province has been drawn up in consultation with the Regional Controller of Railway Priorities, Madras. Under this scheme, the Province has been divided into the following five groups of districts:—

Zone 1: Vizagapatam, East Godavari, West Godavari, Kistna and Guntur.

Zone 2: Kurnool, Bellary, Anantapur, Cuddapah and Nellore.

Zone 3: Chingleput, Madras, South Arcot, Chittoor, North Arcot and Tanjore.

Zone 4: Salem, Coimbatore, Trichinopoly, Malabar and South Kanara.

Zone 5: Ramnad, Madura and Tinnevelly.

Of the five groups, Zones 1 and 5 are self-sufficient, and no movements from or into the zones will be allowed.

Zone 2 is surplus. The surplus from Bellary District alone will be allowed to move to the deficit districts in Zone 3.

Zones 3 and 4 are deficit and no movement of the seed will therefore be allowed to places outside these zones. To meet the deficit in these zones imports from outside the zones will be arranged for.

There will be no restrictions on the movement of the seed from one district to another within each zone. Any movement of the seed not in conformity with the above scheme will not be assisted by the railways.

Standard Cloth Sarees

After consulting the Provincial Advisory Committee for Standard Cloth, the Bombay Government have sanctioned a reduction, from 15th February in the prices of standard cloth seven-yard and eight-yard *sarees*, received against the first four allotments of standard cloth. The prices have been reduced from Rs. 3-9-9 to Rs. 2-12 for seven-yards *saris* and from Rs. 4-9 to Rs. 3-10 for eight-yard *saris*, says a press note from the Director of Information, Bombay.

New Profit Margins Fixed

The question of reallocating the margins in the sales of cloth and yarn among dealers in the various stages in the chain of distribution has been engaging the attention of the Textile Commissioner for some time now and he has in consultation with the Textile Control Board decided to change the existing margins. By a notification issued by the Textile Commissioner and published in the *Gazette of India Extraordinary* dated the 2nd February 1945, it is provided that quota holders should not sell cloth to anyone at a price exceeding 3 per cent. above the ex-mill price. Similarly, dealers who want to dispose of cloth to dealers in another zone are prohibited from charging more than 3 per cent. above the ex-mill price. The notification also provides that the wholesale prices applicable to all other transactions in cloth should not be in excess of 10 per cent. over the ex-mill prices. Another notification published in the *Gazette of India Extraordinary* of the same date provides for profit margins for the sale of yarn manufactured in India. For the purpose of determining the margins for the sale of yarn, it has been decided to group different counts of yarn into different categories and the profit margins have been fixed in relation to the groups and the nature of the transactions, depending upon whether the sale is between a manufacturer and a dealer; between a dealer and a dealer in bulk and whether the sale is wholesale or retail. The notification provides for the inclusion of the freight actually paid to the selling price subject to a maximum fixed by the notification.

In view of the above provisions, another notification issued in the *Gazette of India Extraordinary* of the same date deletes sub-clauses 3 and 4 of clause 12 of the Cotton Cloth and Yarn Control Order, which provided for different margins for the sale of cloth and yarn within and without the 100-mile limit of the manufacturing centre.

Stamping of Prices

The Government of India have amended clause 13 of the Cotton Cloth and Yarn (Control) Order, with a view to clarify the provisions of the existing clause. The clause as amended provides that no manufacturer or dealer shall stamp any marking which has not been specified by the Textile Commissioner or make any addition or alteration to the specified markings. Possession by any person of cloth or yarn with defaced or altered markings is an offence punishable with three years' imprisonment in addition to fine. Those who have got such cloth for *bona fide* personal requirements are not covered by this notification.

The same clause further provides that no manufacturer shall mark any cloth or yarn for which prices have not been fixed and notified by the Textile Commissioner except in cases where prices for such cloth or yarn have been submitted for approval to the Textile Commissioner and provisional prices have been supplied by the member of the Industry's Committee of the Board concerned, these prices may be stamped on the cloth or yarn, and will be deemed to be prices fixed and notified by the Textile Commissioner pending final decision in the matter. The latter provision, however, does not apply to those manufacturers who had less than 25 power looms on 1st January 1944 or to any processor.

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Cotton Plant Puller Propaganda

(*Concluded from page* 304)

puller was not at all a difficult rate once one is accustomed to the proper handling of the implement. In all such tests we asked the *kodali* cutters to enter; but only at one place did the operator with *kodali* enter the competition and was so soon outstripped by all plant puller entrants that he withdrew before even half his row was cut.

Ease of working the land after rain by other cultural implements where the plant puller has been used is so universally acknowledged that for many it is the reason for inclusion of the plant puller in their armoury of field implements.

Even in a measure like this, research and demonstration does not fulfil its object unless the practice is enforced on all by an Act of State. Foreseeing the need for such a measure, a Noxious Disease and Pest Control Act was passed by the Baroda Government in February 1940. It has been invoked to make the use of the plant puller compulsory.

For this purpose propaganda had to be made by wide circulation of leaflets and by talks with village leaders, revenue authorities and co-operative societies.

The area under cotton in the Baroda District is over 400,000 acres. The bulk of this is distributed in nine talukas and for facility of operation of the Act, it has been considered advisable to apply it in three stages, over 150,000 acres being taken up in Karjan, Sinor and Dabhoi in the first stage, over 100,000 acres in Sankheda, Tilakwada and Dabhoi in the second, and over 150,000 acres in the third stage in Waghodia, Padra and Savli; thus having all the cotton talukas of the district completely under the operation of the Act in 1944.

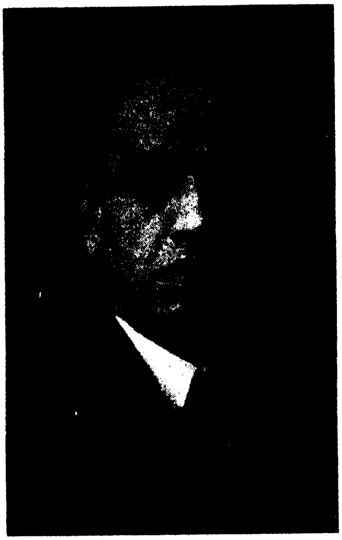
In actual working of the Act in the first stage last season, some difficulties of an administrative nature concerning tenancy and land-leasing practices were met with. It is hoped these have now been smoothed out by the help of the revenue authorities.

Special field staff had to be employed to see that the measure was being put into force. This was in addition to the assistance of the existing staff. Last season's experience was gratifying considering the difficulty of moving the usually inert mass in acting up to the requirements of the Act, and it is hoped that by 1944 every cotton cultivator will be so familiar with the operation of the measure that every one will automatically act up to it for the benefit of all concerned.

OUR PERSONAL COLUMN

The Millowners' Association, Bombay

Sir Vithal Chandavarkar, Kt., M.L.A., has been re-elected Chairman of the Millowners' Association, Bombay, for the year 1945. He is the Managing Director of Messrs. N. Sirur & Co., is a Director of several cotton mills in Bombay, Mysore and Hyderabad, and has been representing the Association in the Central Legislative Assembly since 1941. He was on the Committee of the Association for several years, was its Deputy Chairman in 1935 and Chairman in 1936, 1940, 1941, 1943 and 1944. He was formerly Mayor of Bombay, Vice-Chancellor of the University of Bombay and President of the Rotary Club of Bombay.



Mr. J. C. Lancashire, of Messrs. Forbes Forbes Campbell & Co., Ltd., has been re-elected Deputy Chairman of the Association for the year 1945. He is a Director of the Gokak and Simplex Mills and has been connected with the textile industry of this country in all phases of its production and distributive activities for over 25 years. He has been a member of the Committee of the Millowners' Association since September 1941.

The following have been elected to serve as members of the Committee of the Association for 1945:– Sir Ness Wadia, Sir Sorab Saklatvala, Messrs. A. Geddis, T. V. Baddeley, H. F. Milne, Dharamsey Mulraj Khatau, A. Pether, Neville N. Wadia, Krishnaraj M. D. Thackersey, G. D. Somani, L. F. H. Goodwin, H. G. H. Everitt, Ramniwas Ramnarain, Ramnath A. Podar, Bhagwandas C. Mehta, W. B. Bryden, Tansukhrai M. Karundia, and Navinchandra Mafatlal.

The Indian Merchants' Chamber, Bombay

Mr. M. A. Master, General Manager of the Scindia Steam Navigation Co., Ltd., was unanimously elected President of the Indian Merchants' Chamber, Bombay, for the current year.

Mr. Master has been a member of the Committee of the Chamber for a number of years and last year was Vice-President. He is a member of the Governing Body of the I.M.M.T.S. "Dufferin," the Shipping Policy Committee, and the Lighthouse Committee. He is also a trustee of the Port of Bombay, and has represented India at International Shipping Conferences. Prior to the flotation of the Scindia Steam Navigation Company he was connected with the management of the Sholapur Mills and the Morarjee Goculdas Mills, Bombay.

Mr. Mahomed Husein Hasham Premji, who has been elected as the Vice-President of the Chamber for the year 1945, is a graduate in History and Economics of the Bombay University. He joined his father in the family business of Messrs. Hasham Premji and has been at the head of the organization since 1936 when his father died. He has paid several visits not only to Burma and Ceylon but to England, France, Germany and other countries on the Continent. Messrs. Hasham Premji have extensive trade connections with the above countries and Africa and have interest in a variety of commodities including cotton, cotton-seeds, textiles, groundnuts, oil, tea, hessian, rice, grains, etc.

Mr. Premji represents the Federation of Indian Chambers of Commerce and Industry on the Foodgrains Prices Control Committee, the Foodgrains Procurement Committee and the Food Advisory Council and has been a sitting member of the Committee of the Indian Merchants' Chamber for the last six years.

The following members were declared elected to the Committee of the Chamber for 1945:–

Mr. Pranlal Devkaran Nanjee, Messrs. Pratapsinh, Mathuradas Vissanji, Ratilal M. Nanavati, Vijaysinh Govindji, Ratilal M. Gandhi, Sankalchand G. Shah, Mangaldas B. Mehta, Prof. Sohrab R. Davar, Messrs. Dawood Hajee Nasser, Amratlal Kalidas, Sarabhai Prataprai, R. G. Saraiya, Chimanlal B. Parikh, B. M. Bhargava, Mathuradas Canji Matani, C. S. Patel, Dhirajlal C. Modi, P. M. Chinai, Nandlal M. Bhuta, B. S. Dabke, Mohanlal A. Parikh, Haridas M. Parikh, and Vallabhdas Vasanji.

The engagement is announced between **Major P. W. Beardall,** I.A.O.C., eldest son of Mr. and Mrs. W. R. Beardall, Framton, Boston, Lincoln, and **Jean Marie Guthrie,** only daughter of Mr. F. Guthrie (Manager of the Century Mills, Bombay) and Mrs. Guthrie of Manchester and Bombay.

The Syndicate of the Bombay University have lent for a year the services of **Prof. C. N. Vakil,** Director, University School of Economics and Sociology, to the Government of India, to act as economist to the Planning and Development Department.

Seth Surajmal Gendalal Badjatia, millowner, industrialist and banker of Indore, is Managing Director of the Gendalal Mills, Ltd., Jalgaon, East Khandesh. Well known for his business instincts, at the age of 19 he was managing the finances of the Agra United Mills, where he came into contact with business men of high reputation. The training he had under his father, combined with his own innate ability, helped him to bring the firm to its present position. He also worked the Cambay Mills on lease very efficiently and made a name among millowners.

Seth Surajmal's personal charm is said to have won for him the trust and confidence of everybody and his devotion to duty and sound business instincts have only cemented the relations so formed. He has displayed a broad, progressive outlook in all walks of life. His philanthropic activities include running an Ayurvedic dispensary, donations to educational institutions, to temples and the poor. The welfare amenities provided in his mills are well spoken of.

Seth Surajmal is the President of the Bada Sarafa Cotton Association, Indore. He has not lagged behind in helping the war effort; his mills have been working on war orders and he has himself contributed generously to the war and Red Cross funds.

Mr. K. D. Guha, Director of Industries, C.P., has been appointed Deputy Industrial Adviser to the Department of Planning and Development, Government of India, from April next.

Mr. S. C. Joshi, a member of the Bombay Legislative Council and labour leader, has been appointed Labour Commissioner of the Government of India with headquarters at New Delhi. Mr. Joshi, an advocate of the Bombay High Court, is connected with the G.I.P. Railwaymen's Union, the Postal Employees' Union, the Reserve Bank Employees' Union and several other organizations. He is also the President of the All-India Railwaymen's Federation. He is relinquishing his leadership of all these labour organizations consequent on the acceptance of his new office.

This appointment is in pursuance of a scheme for appointing a Labour Commissioner and Deputy Labour Commissioners in different zones with a view to improving and strengthening the machinery for the conciliation of trade disputes arising in undertakings owned or controlled by the Central Government, including federal railways, mines, oilfields and major ports.

Mr. D. G. Jadhav, Conciliation Officer for the East Indian and the Bengal and Assam Railways, has been appointed to one of the posts of Deputy Labour Commissioners. Two more Deputy Labour Commissioners will be selected by the Federal Public Services Commission.

Memon Chamber of Commerce.—The following members have been elected office-bearers of the Memon Chamber of Commerce, Bombay, for the current year: Mr. H. H. Ismail, President; Messrs. Alhaj E. Mottiwala, Vice-President, Ganny Mohamed and Gulmohamed, Honorary Secretaries.

Mr. A. W. Percy, Manager of Burmah-Shell Oil Storage and Distributing Co. of India, Ltd., Bombay Branch, was unanimously elected Vice-President of the Bombay Chamber of Commerce for 1945-46. Mr. Percy has been a member of the Committee for the past few years and is at present Chairman of its Labour Sub-Committee. He is a Justice of the Peace.

Mr. Cassamally Munji has been unanimously elected President of the All-India Muslim Chamber of Commerce and Industry for the year 1945.

Sir Victor Sassoon, Bart., the well-known millowner of Bombay, has given Rs. 4,00,000 to the Governor of Bombay for the welfare of troops in the Bombay Presidency.

In making this very generous gift, Sir Victor says, in a letter to Sir John Colville, that he does so in response to the Prime Minister's statement in the House of Commons recently on the subject of the welfare of troops in India and that he is anxious that Bombay should lead the way in this matter.

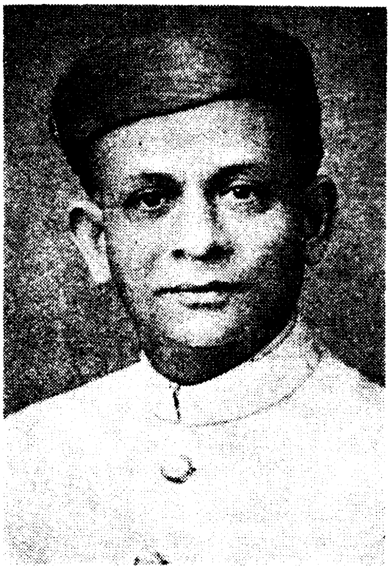
Mr. H. A. H. McGill, of Messrs. Platt Bros. & Co., Ltd. the well-known textile machinery manufacturers of Oldham, England, has been elected Chairman of the newly founded Russian trade section of the Manchester Chamber of Commerce.

Sheth Shantilal Mangaldas, well-known mill magnate of Ahmedabad, was the guest of honour at a luncheon party at the Taj Mahal Hotel, Bombay, arranged by his friends on the eve of his departure by plane to attend the opening ceremony of the first Overseas Branch of the Exchange Bank of India and Africa Ltd., at Colombo.

Sheth Shantibhai thanked all present for their good wishes and the honour done to him and said that the main object of the Exchange Bank of India and Africa Ltd. was to finance the import and export trade of India in its humble way.

Sheth Shantilal is connected with the management of four cotton mills, the Jehangir Vakil Mills and the Rustom Jehangir Vakil Mills, Ahmedabad, the New Jehangir Vakil Mills at Bhavnagar and the Navjivan Mills at Kalol. He has been representing the Ahmedabad Millowners' Association on the Bombay University Senate for several years and has served as a member of the Board of Visitors of the Department of Chemical Technology of the University of Bombay. He is a director of several textile concerns, insurance companies and banks.

Mr. Masturlal Chunilal Mehta, the Proprietor of Masturlal Chunilal & Co., Ahmedabad, a well-known firm dealing in mill stores, started business with small assets in the year 1936. Prior to this, he was a partner of the firm of Messrs. Narottamdas Chunilal & Co., and managed its affairs for a period of 20 years.



During his business career, Mr. Mehta has widely extended his firm's activities in the textile trade and to-day the firm can boast of its connections with several leading mills as suppliers of essential mill stores. Due to his longstanding and thorough experience coupled with skilled organization, he is highly popular in commercial circles.

The firm, which has its Bombay office at 73, Apollo Street, and is represented in other large textile centres also, has specialised in cotton ropes, English bobbins and Kenyon's woollen goods like roller and clearer cloths and sizing flannels. They are also stockists of bobbins and shuttles, healds, reeds and wire healds, leather goods like roller skins, picking bands, belting, etc., cotton ropes and bandings, cotton tapes, heald cord, etc., all of well-known English makes. They are also makers of the "Spin-well" brand of roller varnish.

Mr. Sashittal Nagesh Rao, Technical and Sales Manager of Das & Co., mill-stores, colours and chemical merchants, of Ahmedabad, proposes to make an extensive tour of Great Britain and the United States of America on behalf of his firm with the idea of forming new connections as well as renewing old ones to be ready for trade expansion during the post-war period. During his stay of about four months in the United Kingdom and another 4 months in the United States of America, he will get in touch with machinery manufacturers for selecting machinery for the manufacture of root starches and their products in this country; he will also select suitable plant for the making of materials useful for the textile industry in India.

Mr. Rao was a student of the V.J.T. Institute and has obtained the L.T.C. diploma and has passed the City and Guilds examination in dyeing, technology of oils, fats and waxes. Prior to his joining the firm of Das & Co. he was serving for a short period as an assistant in the Standard Mills and as Dyeing Master in the New China Mills. During his tour he will represent not only Das & Co., but also its sister concerns, the United Export and Import Company and Bhagwati Cotton Trading Company, etc.

Mr. V. Ethirajulu Naidu, formerly Spinning Master of the Raghuvanshi Mills, Bombay, has joined the Swadeshi Cotton and Flour Mills Ltd., Indore, since the middle of 1944 in the same capacity.

Trade Union Congress Working Committee.—The General Council of All-India Trade Union Congress has elected the following members to the Working Committee:– Messrs. B. T. Ranadive, F. E. Qurban, D. S. Vaidya, R. K. Bhogle, Bankim Mukerji, Rannen Sen, S. S. Yusuf, Gyanavikash Maitra, Kalayanasundaram, V. V. Giri, V. R. Kalappa, B. K. Mukerji, Dinker Desai, K. N. Joglekar and Viswanath Dubey.

Problems of Industrial Labour in India

Regulation of Wages by the State

In " The Regulation of Wages and Other Problems of Industrial Labour in India," Mr. D. R. Gadgil, M.A., M.Litt. (Cantab.), brings together the lectures delivered by him as Banaili Reader of the Patna University. Mr. Gadgil deals with wage-levels in theory and practice and with the effects of wage movements on the volume of employment at a given time. He then tackles the problem of the regulation of wages and proceeds further to cover the subjects of rationalization, industrialization and the standard of living. The following pages attempt a survey, to a large extent in the author's own words, of the work and its scope.*

WAGES being far and away the most important cause of industrial disputes in India, the determination of the size of the wage and the methods of paying it constitute the most vital problems relating to industrial labour. So far as the cotton mill labour market is concerned, collective bargaining has been more or less successful in Ahmedabad, but in Bombay, though trade union action has not been effective, the millowners have been regulating wage levels conjointly; elsewhere employer-employee organizations are yet very weak. Data regarding the wages of three important categories of time-workers, e.g., doffers, tarwallas and ring spinners, indicate that the level of wage rates is widely dissimilar in the different centres and regions of the Province of Bombay. It has also been found that, even in the same centre, the level of rates paid by the different units is not uniform. " The present working of the economic system in India," says Mr. Gadgil, " does not seem to bring about or even to tend to bring about a similar scale of charges levied on the product of the industry for similar service rendered to the industry." The variations are particularly wide in centres where, unlike in Ahmedabad, wages are unregulated. Commenting on these variations, Mr. Gadgil expresses the opinion that the usual assumptions on which a theory of wages has been built do not hold good in India and that there should therefore be no question of prescribing policy on the basis of that theory. In an ideally free labour market there should not be so many divergences as to call for the intervention of external forces in order to effect an " equitable distribution of resources and adjustment of payments."

Wages and Employment

Mr. Gadgil poses the question: How is the volume of employment in particular industries in India and the total volume of industrial employment likely to be affected by a movement of the wage rates? We must note, he says, certain peculiarities of the employment of industrial labour in India. It is working at a very low rate of efficiency, and so a wage increase may result in the substitution of machinery for labour (and therefore reduction in volume of employment) or it may increase standard of living and consequently efficiency (which might make it profitable to employ the same volume of labour as before at the higher rate). Another peculiarity is that increase in wage rates results in a falling off, at least temporarily, in the labour supply. But according to Mr. Gadgil there is little connection between higher wage rates and higher absenteeism. Employers maintain that wage rates and earnings have been steadily moving upwards during the last few decades. " If there was definite correlation," says Mr. Gadgil, " between higher earnings and higher absenteeism there should have been evident, *pari passu*, a tendency towards increased absenteeism during all this period, but no such tendency is even alleged to be in evidence."

Short-term repercussions of a wage increase on the volume of employment will vary with the measure of importance attached to wage costs in the total expenses of production. In the cotton textile industry of the province of Bombay, the costs of labour are between a fourth and a fifth of the cost of the finished product. In this industry, however, wage rates are stationary over comparatively long periods and the volume of employment offered varies over short periods by a lesser or greater resort to night shift working. The level of wage rates has little effect on these short-term adjustments in the extent of employment offered, adjustments which depend almost wholly on temporary changes in the state of trade and industry. If all considerations are properly weighed, it appears that movements of wage rates of a limited size should have little effect on increases in production or employment in industry during a short period.

Rationalization and Wages

Dealing with rationalization, Mr. Gadgil explains how it affects labour directly through changes in the technique of manufacture and in the methods of labour management. The aim of rationalization measures is generally the reduction of the cost of production per unit and the increase in the margin of profit, or alternatively diminution in the margin of loss. Labour cost in most industries is an important component of the cost structure. There are two ways in which this labour cost could be reduced. Either the rate of payment per unit of labour could be reduced or each unit of labour could be made to go farther in its productive effort by increasing its efficiency or by bringing about a reduction in the number of units of labour required in the different processes. The cotton textile industry in the city of Bombay entered a period of depression in 1924-25 which lasted for nearly a decade. The Tariff Board in 1927 reported that the level of wages in Bombay was one of the reasons for its lack of competitive power. But labour stoutly opposed any move to reduce wages, which was actually effected only in 1933-34. In these circumstances it was only to be expected that the millowners should have tried to reduce labour costs per unit of output by methods other than a direct cut in wage-rates. Each operative was asked to do more work or mind more machines than he was used to. Because the process of introducing labour-saving plant is a gradual one, it rarely results in the actual displacement of employed labour. The chief effect of such introduction is therefore one of not bringing about an expansion in the demand for labour to the same extent as might otherwise have taken place; this seems to have happened to some extent in Ahmedabad. In Bombay, on the other hand, rationalization creates an acute problem, for it leads to fear of direct unemployment among labourers, and that usually at times of trade depression.

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* Published by the Gokhale Institute of Economics and Politics, Poona. Price: Rs. 5 or 10*s*.

> **" If," says Mr. Gadgil, " there is a strong feeling among the mass of workers against rationalization methods trade union leaders might find it inexpedient to co-operate actively in working out measures that are unpopular, because the appointment of experts on the side of labour places on labourers the responsibility of accepting ungrudgingly all the innovations to which their experts may agree. In the ring spinning department of Ahmedabad cotton mills rationalization was brought about by joint agreement between the Ahmedabad Millowners' Association and the Textile Labour Association, but it is now complained that the Labour Association is now taking up a *non-possumus* attitude in respect of proposals for the other departments.**

In Bombay rationalization, in the sense of intensification, has been taking place for more than a decade. Conditions in the rationalized departments have distinctly improved in recent years and complaints and disputes on this score are fewer in number now than they were a few years ago.

Regulation of Wages

There is enough evidence to question the existence under Indian conditions of a competitive or fair wage level or of any tendency towards the establishment of such a level. Other charges on or shares in the product of the industry, e.g., managing agents' remuneration, are also not determined in a consistent or a uniform manner. Proceeding, Mr. Gadgil observes: " Wages in India are determined not by the uniform operation of an inexorable economic law but by considerations of the particular circumstances of each locality and each unit; the forces of the economic market (of the economic theorist) operate only slowly and unevenly."

Non-interference with wages as a doctrine of State policy in India during the past has resulted in producing conditions not of an orderly competitive market but of chaos and disorder, in which unfair competition and low and uneven rates of wages have been prominent. *Laissez faire* having completely failed, we must have resort to regulation. The regulation of wages must become a normal feature of the industrial situation. So far the only measure undertaken by the State in India has been the Payment of Wages Act (1936), a useful piece of legislation which has prevented or minimized a number of abuses in connection with practices adopted by employers to effect indirect cuts in wages.

Low wages are the result of either (*a*) absolute low level of the total proceeds of the industry to be shared or (*b*) a low share of the proceeds accruing to the wage-earners. The former can be improved by increased industrial efficiency, the latter by improving labour's bargaining power or by outside interference. Several years ago the level of wages in the cotton mills of Ahmedabad was lower than in Bombay, but subsequently it became definitely higher; the industry in Ahmedabad has been expanding continuously, its production and employment figures having increased, the efficiency of the units has also increased as well as the efficiency of labour. The installation of modern plant and up-to-date labour-saving machinery has been a marked feature. Labour in Ahmedabad is also better organized than anywhere else in India. Collective bargaining and, to a certain extent, standardization of wages have been in force for several years in that centre.

Why Regulation Is Necessary in India

The regulation of wages in India is necessary because of (1) unduly low wages in particular occupations and units, (2) the undesirable effects of the possibility of the undercutting of wages by the employers and (3) the difficulties created by disparities in wage rates in the matter of preserving industrial peace. The less efficient employer must be forced to pay the same wage as the more efficient; also he would have no incentive to improve his methods and " would continue to produce on a scale larger than the one to which he is entitled."

The regulating agencies and measures are of three kinds: (1) Collective bargaining between both sides, (2) one-sided regulation by one party to the wage bargain, and (3) action by the State.

There is a general tendency at present to guarantee certain minimum conditions for labour universally by legislative action and to leave the rest to collective bargaining. But, in India, the only instance of collective agreement dealing with wage rates is the arrangement obtaining in the Ahmedabad cotton mill industry, and we cannot look to it for a wider application of collective agreements. One-sided regulation by either the workers themselves or by the employers is one alternative. In the province of Bombay, ever since the close of the last war, employers have been acting together in these matters. The Millowners' Association, Bombay, was responsible for preparing the scheme for the standardization of wages submitted to the Bombay Strike Enquiry Committee (1928-29). It was not, however, adopted, and chaotic wage conditions continued until 1934 when the Association introduced a schedule of minimum wages. This schedule was confined to certain important time-rated occupations, and its scope has been increased slightly in recent years. But obviously this is a regulation that is too one-sided and cannot, therefore, be recommended for wider application. Being framed and enforced by the employers themselves, it cannot be expected to inspire confidence in the workers, so that we are left with the other alternative of State action. With the great diversity of labour conditions in India it is not necessary, according to Mr. Gadgil, that a uniform system should operate throughout the country, but the Provincial Governments should see the desirability of having a similar policy in these matters.

Agency Best Suited to India

What, however, is the best type of wage regulation suited to India? Mr. Gadgil answers: Minimum wage fixing machinery. In India the rates of payment differ widely from unit to unit and some concerns pay a very low wage, and, therefore, a system of minimum wage regulation should be immediately introduced.

But what is the most suitable machinery for minimum wage regulation in India? Arbitration courts or trade boards? The experience of arbitral bodies elsewhere demonstrates the absence of any scientific or theoretical basis on which an absolutely just division of the proceeds of industry can be founded and on which an accurate assessment of wage levels can be made. In countries like Canada or Australia the desire for the protection of the national standard of living inevitably led to an attempt to lay down a general minimum level which had nothing to do with any particular occupation or industry. The problem in India, however, is to raise, by a series of particular measures, the standard of living of those in receipt of very low incomes. The concept of a single general minimum is, therefore, inapplicable to Indian conditions. We want wage-regulation in order to prevent an unduly low wage in certain occupational categories, to prevent the subsidizing of the low-wage-paying employer and to allay labour discontent. Wage regulation must, therefore, cover all the main occupational categories. The minimum wage schedule of the Millowners' Association, Bombay, covers all important classes of time-rated workers up to the rank of jobbers and supervisors, just as in the case of trade board lists in England.

Wage regulation in India must, therefore, take the form of schedules or lists of wages which lay down the minimum rates for all occupational categories of workers included in the industry for which the regulation is framed. "Scientific measurement of the difference in the type of work and effort called for from different classes of workers is possible within close limits, and wage rates for separate classes can be determined in a scientific manner following such a measurement of the differences in the quality of effort required." There are, however, several special difficulties in India. The first relates to the spread between the earnings of different classes of workers. The differences in payment to the unskilled, semi-skilled, and skilled, workers in India are disproportionate in comparison with the differences ruling elsewhere. These disparities are even greater when the level of payments to the manual workers is compared with levels of payments to the clerical, the technical, and the managerial staffs. But this disparity in earnings between the skilled and the unskilled is greater in the smaller centres of industry than in the larger ones. Thus "while the rates of payment to doffers and single-side ring siders are distinctly lower in Sholapur than in Bombay, the rates of payments to weavers in the two centres are almost the same." This is perhaps explained by the fact that, "while in the larger centres a fairly numerous class of semi-skilled and skilled workers has been built up in course of time, the paucity of skilled and semi-skilled workers continues to be marked in the smaller centres of the industry."

There are two ways in which these disparities can be acted upon from outside: the spread of general and technical education, and accurate methods of determining the differences in the quality of the work performed by the different classes of workers and fixing the corresponding money differences. But in Mr. Gadgil's experience, there is no unanimity among employers from the different centres on such points as the relative strenuousness of different kinds of work. Room for difference of opinion is even greater when it comes to detailed calculations regarding payments. The rates of payments for, e.g., the front-sider and the back-sider and to the drawer-in and the reacher-in in the different cotton mill centres in the Province of Bombay differ very considerably. When these differences are studied comparatively for the various centres in India, the divergence is found naturally to be even wider.

Trade Boards and Their Working

Mr. Gadgil's conclusion is "that rates of wages in industry are best determined by the representatives of employers and employees in the industry itself; for, an outsider who has no intimate knowledge of conditions in the industry is apt to go wrong." The most appropriate machinery for wage regulation would be that of a Trade Board, the majority of whose members will be composed in equal measure by representatives of employers and of workers. Minimum wage regulation through the machinery of Trade Boards would seem to be the most appropriate, particularly in view of the very great differences noticeable in the extent of development of the industry, the sources and nature of the available labour supply, and the state of organization among employers and labourers.

Maintaining Industrial Peace

Mr. Gadgil deals with the problem of maintaining industrial peace from the point of view of narrowing the grounds of possible differences of opinion by, e.g., the regularization and systematization of wage payments. Any measure that leads to a feeling of contentment among the working classes and to the creation of a confidence that they were, as individuals and as a class, being dealt with justly must automatically help the cause of industrial peace. There will, however, arise occasions on which a difference of opinion regarding the terms of a particular bargain will be evident between the two parties. The machinery and technique of maintaining industrial peace is particularly concerned on these occasions. In India the employers are as a rule stronger. Non-members of employers' organizations from among the constituent units of the industry are always few in number. On the other hand, the proportion of members of trade unions among individual workers is very small. This disparity in membership between employers' and workers' organizations is more marked in India than elsewhere. Indian labour leaders and organizers rarely come from the ranks of actual workers. Trade unions, too, have not generally found it possible or desirable " to give sufficient attention to organizing any common or corporative activities which might interest or help their members." Therefore many trade unions have laid themselves open to the charge of being no more than strike committees. Nor have the employers been helpful. They consider it worthwhile to incur even considerable immediate losses if they can permanently prevent an inconvenient union from coming into existence. They are unwilling to deal with the leaders of such organizations as exist and, when forced by circumstances or outside pressure to deal with them, they are anxious to withdraw from the position as soon as it is possible. This being so, the problem in India is one of " initially helping a proper organization of workers and obtaining for it the right to bargain collectively." Unfortunately, at present, the conduct of trade union affairs is largely influenced by extraneous considerations. There are two classes of labour leaders in this country: those whose political or other creeds simply colour their general policy and for whom the immediate interests of the trade union and the interests of its individual members are of paramount importance, and those others who are " primarily interested in a faith or a philosophy and its spread and to whom unionization of labour is an incident and a means to certain ultimate ends." " *We have mostly had so far the latter type of leadership prominent in our labour movement.*" And this, naturally, has determined the *sticking point* of the workers, which has often been fixed at too high a figure, owing perhaps to the outside leader's underestimating the positive cost to the workers of the struggle and his treating as very important the advantage that may accrue from the struggle apart from the particular point that is at issue. And, according to Mr. Gadgil, " Indian trade union leaders seem to have given considerable importance to this latter kind of negative costs." Outside leadership tends largely, therefore, in the direction of prolonged dislocation of industry and of an increase in the cost to the community of the industrial dispute. The solution of the problem is not simple ; what is wanted is " more literate, more educated and a more stable labour force capable of throwing up leaders from among itself."

Methods of Conciliation

There are three methods of intervention in industrial disputes: (1) Inquiry, (2) conciliation and (3) arbitration. An inquiry committee's report presents an expert independent review of the situation and its findings on it. The essential nature of conciliation, on the other hand, is not investigation or inquiry, but arranging to get the two parties together to effect a settlement. Conciliation may often succeed but is not always and necessarily effective. Arbitration, whether voluntary or compulsory, leads ordinarily to a final settlement, the arbitral award being binding on both the parties. " A committee of inquiry would tend to arrive at what appears to it to be the logical conclusions arising out of its review of the situation, but a board of arbitration must look not only to the logic but also to the workability of the award that it presents. It would ordinarily prefer a solution that appears workable and satisfactory to both parties to a solution that was merely correct."

Before the war of 1914-18 leaders of labour organizations in India were not adequately protected in law; the Trade Union Act of 1926 removed this difficulty, however. But the first legislative enactment providing for official intervention in labour disputes was the Trades Disputes Act of 1929. Almost no use was, however, made by Provincial Governments of the provisions under this Act regarding the appointment of boards of conciliation, and the Bombay Trade Disputes Act of 1934 sought to remedy this defect.

The Bombay Industrial Disputes Act, 1938

The Bombay Industrial Disputes Act of 1938 was a much more ambitious piece of legislation. These two Bombay Acts constitute the sole experiments in the sphere of machinery for the settlement of industrial disputes in India. Mr. Gadgil then examines the working of the 1934 Act and compares it with that of the 1938 Act. The least disputed feature of the latter Act is the provision for compulsory conciliation, before the completion of which any strike or lockout that may have been declared is illegal. In addition to conciliation, expected to be carried out by officers of the Government Labour Office, the Act of 1938 provides for the appointment of Boards of Conciliation for dealing with particular disputes. In this connection there are two different kinds of approach: the activities of the Ministry of Labour in England and of the Boards of Conciliation and Investigation of Canada. The work of the former is influenced by the principles of informality and privacy, and no reports are published. In Canada the Boards of Conciliation are *ad hoc* bodies which are not merely conciliatory bodies but investigating ones as well, and then reports are published. The Bombay Act of 1934 was built largely on the English model, but section 38 (4) of the 1938 Act lays down that the report of conciliation proceedings before officers of the Labour Office should be published; Mr. Gadgil considers it undesirable to require Government officials " to express definite opinions in public on matters that are matters of violent current controversy between capital and labour." He continues: " The position would not perhaps have been bad if the report could have been confined to a bare recital of the facts and the actual proceedings. Unfortunately, however, the form in which the Conciliator or Boards of Conciliation submit their report seems to be developing in a direction which is not warranted by the provisions of the Act." The Act " nowhere asks for the findings of a conciliator or board of conciliation." In spite of the clear wording of the Act, protests Mr. Gadgil, "Conciliators and Boards of Conciliation have in reports relating to recent disputes included elaborately argued findings and recommendations for the settlement of the disputes and these have been talked of as awards " by the public. **This is a clear case of misdirection of the machinery of conciliation.** By providing for the creation of a permanent industrial court the Bombay Act of 1938 creates for the first time in India permanent official machinery for arbitration between the two parties.

The Court of Industrial Arbitration created by the Bombay Act of 1938 has the advantage of being a permanent tribunal that should eliminate the delay involved in the constitution of *ad hoc* bodies and acquire intimacy with industrial questions and facility in dealing with them. But this arbitration is voluntary; official machinery is merely available to those who would avail themselves of it. Mr. Gadgil recognizes that the habit of referring disputes to arbitration can grow only slowly, and that an extension of State regulation by the introduction of compulsory arbitration cannot be thought of just yet. But under conditions of war, Government have taken a bold step and a Defence of India Rule provides for such compulsory arbitration. It remains to be seen how far this emergency regulation will survive when peace returns. Everyone will agree with Mr. Gadgil, however, that it is highly desirable to facilitate agreements between the two parties to submit all disputes between them to arbitration in the ordinary course.

Mr. Gadgil has some sound criticism to make of the provision in the 1938 Bombay Act regarding the legal rights of so-called "recognized" and "representative" unions. "The Registrar's power to declare occupations and areas," continues Mr. Gadgil, "might well be used in certain cases to give a union the status of a representative union artificially and *vice versa*. The provisions are not only illogical, but lend themselves, under given conditions, to manipulations by the party in power. It is therefore difficult to understand why the Act insists that all the representatives of the workers must be selected from among themselves." These provisions are illogical in conception and likely to prove retrograde in their effect on union organization. The procedure followed by the National Labour Relations Board in the U.S.A. should be our example, according to Mr. Gadgil. In the course of administering an elaborate set of rules for the conduct of elections and the determination of representation, the United States Board has to settle representation controversies between rival unions; but it settles the issue for each particular case and no permanent monopoly of representation is given to any particular organization. The Board does not countenance "the undemocratic principle embodied in the Bombay Act that there can at a time be only one registered union in one area and occupation . . ." This method is "simple, logical and fair and seems to be the only one suitable to India under present conditions." Another drawback in the Bombay Industrial Disputes Act of 1938 is that it makes no difference between individual disputes and group or collective disputes. On the other hand, in a country like India, where trade unions are neither strong nor well organized, some provision for dealing promptly with the grievances of individual workmen is specially necessary. As Mr. Gadgil shrewdly observes, "A prompt settlement of individual grievances is further desirable because collective disputes are apt to arise out of unredressed individual grievances." The institution of special machinery to deal promptly with individual complaints is even more necessary in India than that of machinery to deal with collective disputes. Mr. Gadgil then proceeds to offer some very helpful and constructive criticism of the present position of labour officers in mills and factories and indicates clearly the vast scope that there is for their increasing usefulness in the future.

Standard of Living

The standard of living affects the efficiency of the workers and labour efficiency is an important factor in determining the efficiency of the whole productive organization. The standard of living of Indian workers is one of poverty, extremely overcrowded and unhygienic home conditions, lack of privacy and ordinary family life, paucity of educational, medical or recreational facilities, chronic indebtedness, low money incomes and poor quality and insufficient quantity of food. Apart from directly measurable phenomena like the effects on efficiency of the installation of air-conditioning plants in cotton mills, no investigations have been conducted into the long-term effects of the conditions of living on efficiency. But experience has proved that wherever workers are specially well paid their efficiency is high. When one compares different centres of an industry the efficiency of workers is seen to vary usually with the level of wages paid to them; also when in a centre the level of wages is gradually increased the level of efficiency also increases, as in Ahmedabad.

In the matter of raising the standard of living action is possible in two ways: (1) regarding the wage paid by the employer, and (2) direct and indirect help given by the State or society to raise the standard of living. In India it is wages that determine almost solely the standard of living of workers. But there are limits to the possible action regarding wages, for, as pointed out by Mr. Gadgil, "the economic wage, i.e., the wage that under existing arrangements and in the present economic structure a worker may obtain, is limited by the total product of the industry in which the worker is employed. The total net product of the industry is subject to certain deductions before one can arrive at the total that may be paid out in wages," and there are limits below which these deductions cannot be forced. The total product of the industry is itself the result of the general character of the productive organization, an improvement in the nature and efficiency of which can take place only slowly.

Wage-regulation, however, is necessary to enforce payment of the wage that under existing arrangements is economically possible and proper. The remaining action must be taken by the State. "The wage depends mainly on the effort put forward by the worker and his service to industry: it will have little to do with his individual needs or standard of living. Social action which aims at increasing the standard of living must adopt different criteria." State action in this respect refers usually to separate aspects of the standard of living of the workers and caters for specific needs in each of these aspects. For this purpose direct money payments may be necessary, specially in circumstances where money payment is the most appropriate form of help. Examples of such money payments are outdoor poor relief, old age pensions and family allowances.

Mr. Gadgil then goes on to indicate the directions in which State action towards raising the standard of living would be fruitful, such as education, nutrition, housing, and health.

Cambridge Textile Extensometer

THIS instrument manufactured by **Cambridge Instrument Co., Ltd., 13 Grosvenor Place, London, England,** is suitable for testing almost every type of textile fibre and yarn. It records on rectangular co-ordinates the relation between load and extension of textile fibres, threads and yarns, with increasing and decreasing loads. The specimen being tested can, if necessary, be immersed in a liquid or in a box containing air with a known humidity. Included in the load-extension relationship are such factors as ultimate strength and extension, and hysteresis loss arising from different behaviour during the loading and unloading. The instrument may be operated at a constant rate of loading or a constant rate of extension of the specimen, as desired, the change-over from one type of testing to another being effected very rapidly by means of a switch. The instrument is worked entirely from the A.C. mains, and all electrical contact troubles are avoided by the use of a thyratron or gas-filled relay in the control circuit.

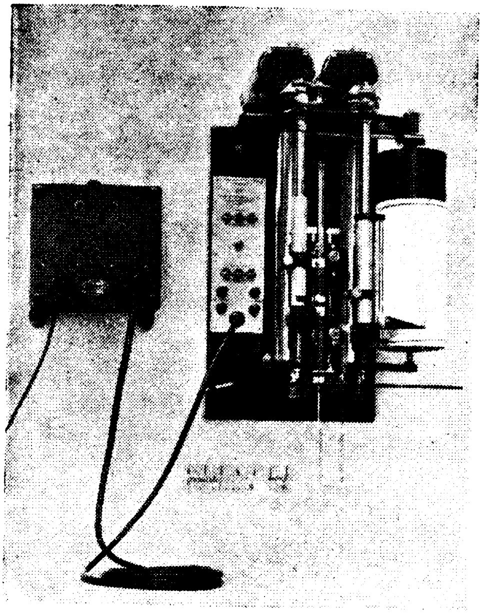


Fig. 1. 24 × 14 × 12 inches—90 lbs.

The extensometer is illustrated in Fig. 1 and is shown diagrammatically in Fig. 2. The basic principle is that the specimen under test and a spring are simultaneously extended by independent means, an electrical contact device keeping their tensions equal. The specimen A is extended by means of the motor W and tension screw B on the left-hand side of the instrument. The spring C is extended by means of a similar motor W_1 and screw D on the right-hand side. One motor (normally the " spring " motor) runs at a constant speed while the other is switched on and off by the sensitive tension-equalising switch E, situated between the spring and the specimen under test. The second motor and gears are adjusted so that if left on continuously they give a speed higher than the maximum required in the test, but the speed is reduced to give equality of tensions by intermittent supply of current through the switch E. The functioning of this switch is so rapid that the motor usually turns at a reasonably uniform speed and produces a smooth record. Two interchangeable sensitive switches are supplied with each instrument, one delicate enough for work on single fibres and the other suitable for use with yarns having breaking loads up to about 3 lbs.

The drum F, which carries the squared paper on which the record is drawn, is driven from the screw B by a double worm gear drive so that its surface movement is either equal to, or five times as great as, the extension of the specimen, the change of ratio being effected by a simple interchange of wheels. The carriage H which runs on the screw D carries a pen J, whose movement is equal to the extension of the spring and, therefore, proportional to the load. The pen thus records the load-extension curve on rectangular co-ordinates.

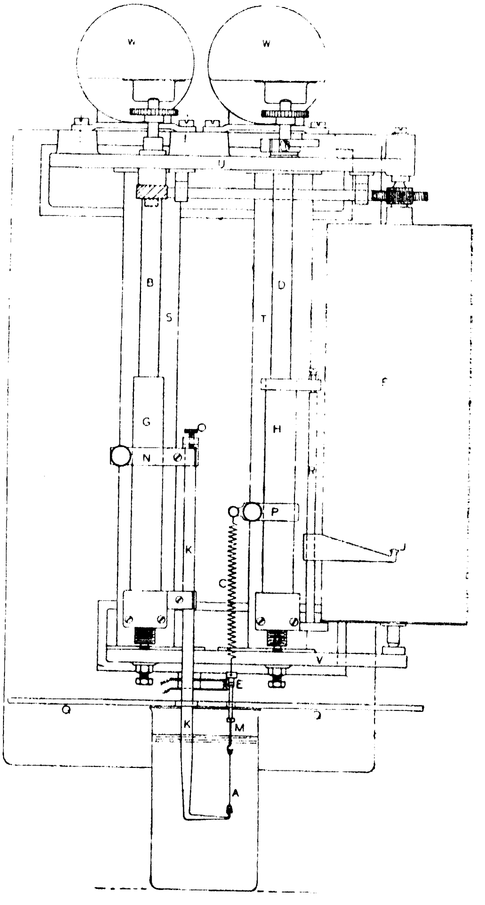


Fig. 2.

The specimen under test is arranged to project downwards below the instrument, and can, therefore, be immersed in a hot or cold liquid or in a humidity chamber. The specimen is carried between a hook-shaped stainless steel member K and a thin rod M which is attached to the sensitive switch. Interchangeable grips for holding fibres, yarns and narrow strips of film are provided. All these parts are made of materials which are highly resistant to corrosion. The adjustment of clamp N on the carriage G allows any reasonable length of fibre to be used, and similarly, the clamp P allows considerable latitude in the length of the spring. Calibrated springs of widely different strengths can, therefore, be readily accommodated. The member K and the rod M pass through a sheet of bakelised material Q, which serves to protect the instrument from vapour and from splashes of any liquid in which the specimen may be immersed.

The drum F is held by a spring plunger and is easily removable from the frame. The pen J can be swung away from the drum when desired and will remain about 1 inch clear. Further, it can be moved into alternative positions along the rod R in order to allow a number of records, starting at any desired distance apart, to be taken on one sheet of paper.

The main framework of the instrument consists of two substantial steel tubes S and T, supported by two end castings U and V, the whole being fastened down to a metal base by means of four feet. The motors W W_1 are mounted on the top casting U and drive through change wheels similar to those on a screw-cutting lathe. They are geared down to 25 r.p.m. on their driving shafts, giving screw speeds of 2.77-225 r.p.m. The pitch of the screw is 1/20th of an inch; a wide range of speeds is thus obtainable. For the interrupted motor these figures represent the maximum speed for any given set of wheels. If a finer adjustment of speed should be found necessary, rheostats can be inserted in the motor circuits, and terminals for the connection of these are provided on the panel.

The instrument is operated from the A.C. mains through a transformer and rectifier unit (not shown in the illustration). This unit also contains a thyratron or gas-filled relay valve, interposed between the sensitive switch E and the controlled motor, which reduces the electrical load on the switch contacts and eliminates contact trouble. All the control switches are mounted on the panel on the left-hand side of the instrument. One switch starts and stops the instrument while the other two define respectively the direction of running and which motor runs at constant speed. Four adjustable limit switches automatically stop the respective motors when the carriages G and H reach any desired point, and in any event before the end of the screw thread is reached.

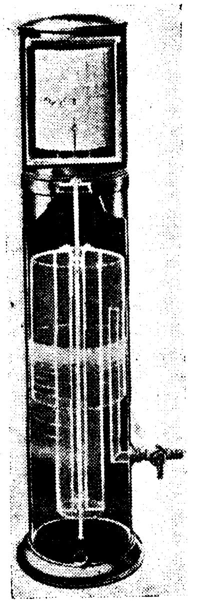
Sensitive Recording Draught Gauges

FOR the efficient operation of steam-boiler plant the use of recording draught gauges connected to various " key " points, such as in the case, for example, of Lancashire boilers over the fires, before and after the economizer, and at the chimney base or fan inlet, is an obvious advantage, and in this connection a notable instrument is the " Arkon " draught recorder, made by Walker, Crosweller & Co., Ltd., Cheltenham (Glos.), England.

The instrument is in the form of a neat vertical sheet metal cylinder, with a chart and pen mechanism in the upper portion, formed with a large window. Dimensions of the cylinder are 8″ diameter with a base of 10″, and various heights depending on the range of the chart required. Thus, for example, when reading up to a total of 0.6″ W.G. to 100th of an inch the overall height of the instrument is 37¼″, whereas a larger size chart, reading up to 4″ W.G., has an overall height of 39¾″.

Essentially the arrangement consists of an inner brass sheet metal float, operating in an outer brass casing, in the form of an inverted bell, suspended in water which rises or falls according to the degree of the draught, that is the suction, a ⅛″ diameter pipe being connected to the instrument so that it projects vertically into the upper portion of the float surface, above the level of the water. As the float moves it actuates the pen rod and pen, which records upon a chart wrapped round a clockwork-driven drum in the upper portion, the chart being rectangular in shape, 18″ long and 6″ working height, with uniform horizontal divisions, so that, as already mentioned, the curve can be read to 0.01″ W.G. Because of the correct proportion between the size and weight of the floating bell the movement of the latter may be as much as ten times the direct measurement of the suction, whilst another important point is that the pen is directly attached to the float with no links or levers, which would considerably increase the friction. Further, the complete recorder is coated with black crystalline stoved enamel, whilst the standard clock used, of strong and reliable construction, makes one revolution in 24 hours and runs for seven days at one winding.

In this connection the firm make a complete range of portable, fixed, indicating, and recording gauges for air and other gases, including the sensitive inclined water-gauge type reading to one hundredth of an inch W.G. These instruments can be used with advantage for controlling air supply for combustion in all types of furnace setting as well as for gas when this is used as fuel.



"Arkon" Recording Draught Gauge.

Indian Cotton Review for 1943-44 *

Production and Supply

THE area under cotton during 1943-44 was finally estimated by the Government at 20,398,000 acres, against 19,203,000 (revised) acres in 1942-43. The 1943-44 crop was estimated by the Government at 5,094,000 bales (revised), against 4,702,000 bales (revised) in 1942-43. Thus the 1943-44 acreage and crop respectively were 6 per cent. and 8 per cent. above the revised estimates for the previous season. The yield per acre worked out at 100 lbs. per acre, compared with 98 lbs. in 1942-43.

Excepting in Karnatak and Indian States, the acreage decreased everywhere in the Bombay Province owing to the grow-more-food campaign. In the Central Provinces and Berar, the switch-over to medium-staple cottons continued but the total acreage was down. In Madras, the decrease in acreage was attributed in part to the prohibition of cultivation of *Mungari* or early cotton. Amongst the notable increases in acreage over the previous season, 1942-43, were those in the Punjab (+14 per cent.), Sind (+23 per cent.), U. P. (+17 per cent.), and the Hyderabad State (+39 per cent.). Being a surplus product of food-grains, the increase in acreage under short-staples that took place in the Punjab was practically ignored. In Sind, most of the increase took place under American seed cotton. In U. P. acreage under short-staples increased owing to high cotton prices of the previous year. In the Hyderabad State the increase in the acreage under short-staples was the highest obviously because the State's " grow-more-food " propaganda failed to reach the actual farming classes.

The pride of place for the highest per-acre yield for the season easily went to the irrigated areas of Sind. The highest per-acre yield of 238 lbs. was registered under Sind Deshi, while the next best was Sind-American with 236 lbs. per acre. Amongst the monsoon-feds, Broach, Surti and Gujerat Dholleras behaved the best of all with respective per-acre yields of 133 lbs., 104 lbs. and 109 lbs. C. P. and Berar Verums showed better results at 83 lbs. per acre against 67 lbs. per acre in 1942-43. Amongst the worst sufferers were the Southerns which showed yields varying between 41 lbs. to 55 lbs. per acre.

Roughly classified into various staple length groups, the production of medium-staple cotton during 1943-44 formed about 62 per cent. of the officially estimated crop, compared with 60 per cent. in 1942-43 and 45 per cent. in 1941-42.

As regards the actual size of the 1943-44 crop, there is no reason to suspect the near accuracy of the Government crop forecast which placed the crop at 5,094,000 bales. The season's total cotton pressings amounted to 4,970,000 bales and the lag between the crop estimate and pressings was insignificant. That is not to suggest that the Government estimation was altogether faultless. The fault could not but be there; but the margin of error appears to be very narrow which is obviously the result of the employment of revised standard yield figures.

Taking the non-factory consumption of about 350,000 bales into consideration, private sources have estimated the 1943-44 crop at about 5,450,000 bales which is 650,000 bales in excess of the private estimate for the previous season.

The season's world supply of Indian cotton, on the basis of private estimates and inclusive of the previous season's carryover (revised) of 2,975,000 bales, should have amounted to 8,425,000 bales, compared with 7,800,000 bales in 1942-43.

Imports of Foreign Cotton

Imports were almost equal to or a little in excess of the previous season's imports of over 500,000 bales. Whereas imports of Egyptians at about 235,000 bales were approximately 27 per cent. less than the previous season, imports of Soudanese and East African cottons at about 80,000 bales and 120,000 bales respectively were approximately 120 per cent. and 40 per cent. higher than the previous season. India continued to be, as in the past, the A-1 customer of East African cottons.

Consumption at its Second Best in History

Mills in India consumed 4,125,000 bales of Indian raw cotton during 1943-44 as compared with the all-time record of 4,307,000 (revised) bales in 1942-43. This was due to the fact that the Indian cotton textile industry could not produce to capacity because of (a) the increasingly difficult position in respect of coal supplies in certain manufacturing areas, which compelled at places either the use of wood as fuel, or entire closure of operations for some weeks, if not months ; (*b*) the restricted supplies of essential stores, and (*c*) the comparative shortage of trained labour.

Total production of piecegoods during the year made an all-time record at about 4,800 million yards (estimate), compared with 4,236 million yards in 1942-43. The increase in production is reflective of increased weaving activity as compared with the previous season when production in leading centres underwent continued interruption and dislocation owing to political activity in the country and resulted in huge stocks of yarn being carried over into the season under review. Of the estimated production of 4,800 million yards, about 500 million yards were earmarked for exports while the Defence Services monopolised about 700 million yards. The estimated 1943-44 exports of 500 million yards compared with 606 million yards in 1942-43 and 944 million yards in 1941-42.

Consumption of foreign raw cottons in India during 1943-44, on the whole, continued well and is provisionally estimated at around 600,000 bales, compared with 609,000 bales (revised) in 1942-43 and the all-time record of 716,000 bales touched in 1941-42. Use of foreign cottons was well-balanced and was well facilitated through the scheme of allocations which allotted supplies to mills from time to time at defined prices with due regard to their actual individual requirements. Moreover, equitable distribution of foreign cotton stocks of all descriptions held within the country was also facilitated by the ban on sales of foreign cotton except on the strength of a licence issued under the Foreign Cotton Control Order, 1944. Mill consumption of all cottons in India during the season 1943-44 thus amounted to roughly 4,725,000 bales, which compared with the all-time record of 4,890,000 bales (revised) touched in 1942-43 and 4,741,000 bales in 1941-42.

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* Published by Chunilal Mehta & Co., Ltd., 51, Marwari Bazar, Bombay.

The total world consumption of Indian raw cotton can be estimated at 4,775,000 bales, compared with 4,812,000 bales in 1942-43, indicating an average monthly consumption rate of 398,000 bales in 1943-44, as compared with 401,000 bales (revised) in 1942-43 and 450,000 bales in 1941-42.

The net 1943-44 exports of Indian cotton to foreign countries were considerably below the peace-time norm. But at about 300,000 bales, these compared well with the all-time low record of 155,000 bales (revised) touched in 1942-43.

Burdensome Carry-over

World's carry-over of Indian raw cotton as on 1st September, 1944 is roughly being estimated at 3,650,000 bales, compared with 2,975,000 bales (revised) a year ago. Of this, approximately 3,550,000 bales containing a burdensome percentage of short-staple and old crop cottons were concentrated in India, compared with 2,875,000 bales (revised) a year ago.

Looking Ahead

The balance-sheet of Indian cotton as at the end of the season 1943-44 is as under :—

INDIAN COTTON BALANCE SHEET
(Exclusive of Foreign Growths)
(Approximate Figures).

Supply throughout India :—		400 lbs. bales
All-India Carry-over as on 1st September 1943.		2,875,000
Approximate crop, 1943-44		5,450,000
Total supply for the season . ..		8,325,000
Distribution—	Bales	
All-India exports (inclusive of Kathiawar ports)	300,000	
All-India mill consumption ..	4,125,000	
Extras for hand-spinning, etc. ..	350,000	
Total distribution		4,775,000
Balance carried over throughout India as on 1st September 1944		3,550,000
Of this carry-over Government of India own about		275,000
" Free " cotton left with the mills and trade..		3,275,00

The situation is bad enough. However, the relatively low production expected during the current season (1944-45) should act as a corrective. In view of the strict enforcement of the Growth-of-Food Crops Act in the Khandesh and other areas, the acreage under cotton in the Bombay Province is expected to be much less than in the previous season. The Hyderabad State also promises to show a reduction of about 30 per cent. in acreage under cotton. Owing to the general food shortage, the relatively disappointing prices for cotton and the increased costs of cotton production, acreage under cotton in other Provinces and States excepting Sind, the Punjab and Madras, is also likely to show a sizeable reduction. Assuming, therefore, that total acreage during the season 1944-45 will be 10 to 15 per cent. less than the previous season, a crop of about 4,500,000 bales can be expected to be raised in 1944-45, which would compare with the private estimate of the 1943-44 crop of 5,450,000 bales.

The total available supply during the season 1944-45, including the carry-over of 3,550,000 bales, should thus amount to about 8,050,000 bales, compared with the 1943-44 supply of 8,325,000 bales.

Victory for the Allies is no doubt in sight ; but the essential factor is the time that would elapse between now and the actual end of hostilities. For aught one knows and thinks, hostilities in Europe can be expected to end any time between now and the first few months of 1945. But the war in the Far East, according to military experts, may take a couple of years to terminate. In that eventuality, firstly, the Supply Department's orders for cloth in 1944-45 can be expected easily to surpass the 1943-44 total mainly because India is the biggest accredited supply base for the Allies in the East and because increased troop movements would mean increased re-equipment demand for Indian cloth. Secondly, the end of the war in Europe would release the pent-up demand from the ill-clad populations of liberated countries in Europe. Looking to the way in which industrial establishments almost in the whole of Europe have been erased first by Germany and then by the Allies, this post-war demand for textiles will have to be taken care of by the United Kingdom or the United States. Under the circumstances, the possibility of these two big producers carrying competition with Indian textiles in the Indian market itself is very remote, at least during the initial portion of the post-war period. Thirdly, the position of Indian textiles in the foreign markets acquired during the war may be somewhat difficult in the long run. But in the near future, there is nothing in the situation to apprehend a loss of these markets and even if a slack in export demand develops, the Indian population itself, which was compelled during war-time to make only frugal purchases of cloth, can be expected to make good the void created in the export demand for Indian textiles. Fourthly, so long as the war lasts there is no reason to apprehend that the profit-stimulant would be lost. It has to be noted in this connection that the whole plan of war-time control over the Indian textile industry is based on the principle of profit for all, that is profit even for the least efficient mill. Nothing has so far happened to suspect that this principle would be given up all of a sudden. Finally, on the assumption that the current shortages in respect of fuel, millstores, machinery parts, etc., would not be allowed to disrupt the full-time working of mills, one ventures the guess that consumption of Indian raw cotton in India during the season 1944-45 may amount to 4,250,000 bales, or about 125,000 bales in excess of the 1943-44 figure of 4,125,000 bales.

As regards exports to foreign countries, the policy of economic warfare adopted by the U.S. legislature by empowering the U.S. Government to sell U.S. cotton at world competitive prices has greatly disappointed India in her expectation that the post-war period would mean better prices for an increased offtake of Indian cotton. The U.S. Government have been authorized by the aforesaid legislation to sell Government-owned cotton to the extent of 1 million to 1½ million bales at competitive world prices. This, in practice, would mean the adoption of the theory of two prices. The home price would be the 1928-peak at which the U.S. Government have promised to buy the whole of the 1944 crop in U.S.A. while the export price will be roughly 4 cents lower in accordance with the latest announcement. Such subsidized exports cannot but strangulate Indian cotton exports unless timely efforts are made by the Government of India to arrive at an amicable settlement with the United States and to secure for India her right to export cotton on the pre-war *pro-rata* basis. If such a right to export on the basis of pre-war *pro-rata* basis is secured, then alone can India expect, after the end of the war in Europe, to export to U. K. and the Continent the pre-war (1938-39) volume of Indian cotton, namely, about 1,299,000 bales. As, however, the war in Europe is yet continuing and it will take considerable time for rehabilitating the mill industry in liberated countries, possible exports in 1944-45 to U.K. and other countries cannot be expected to exceed 600,000 bales at their optimum. The question of the restoration of our biggest pre-war customers, namely, China and Japan, does not at all arise at the moment as both the countries at the moment are in the throes of war. Even if the war in the Far East ends earlier than expected, it is unlikely that the Japanese mill industry would be left unscathed in view of the heavy allied pounding of Japan's industrial centres that may finally eventuate. Under the circumstances, export prospects for Indian raw cotton cannot but be considered to be disappointing.

With domestic mill consumption at about 4,250,000 bales, exports at 600,000 bales and private consumption at homes in India of 350,000 bales, the distribution of Indian cotton in 1944-45 may amount to about 5,200,000 bales. Deducting this from the season's estimated supply of 8,050,000 bales, the carry-over as at the end of the season 1944-45 should work out at about 2,850,000 bales as against the estimated carry-over of about 3,550,000 bales at the end of the season 1943-44.

Post-war Prospects for Indian Cotton

Post-war prospects for Indian cotton are, indeed, gloomy if steps are not taken to plan Indian agriculture on a modern basis. Efforts, no doubt, have been made to draft post-war agricultural reconstruction schemes. But, with due deference to those who drafted them, it has to be stated that raw cotton has received a step-motherly treatment at their hands and, it has, for all practical purposes, been isolated from the purview of the various schemes. The report of Dr. William Burns, D.Sc., C.I.E., late Agricultural Commissioner with the Government of India, on the technological possibilities of agricultural development is an instance in point. **If, as he has recommended, the average yield of rice in India can be raised by 30 to 50 per cent., that of wheat can be raised from 640 lbs. per acre to 1,200 lbs. and that of sugarcane can be raised from 15 tons to 30 tons and even to 50 tons, there is certainly equal scope for the per-acre yield of cotton to increase from the 30-year average of 90 lbs. to, say, 150 lbs. per acre. It is regrettable, however, that Dr. W. Burns should have refrained from placing any target for raw cotton on the specious plea that cotton was a matter of national and international policy.**

In fact, cotton yields can be greatly improved by modern methods of intensified agriculture. That an acre produces 293.3 lbs. (as in the current season) of lint in U.S.A., 531 lbs. in Egypt and 277 lbs. in Anglo-Egyptian Soudan is the very reason why a cut-and-dried reconstruction scheme is needed to improve the per-acre yields of and post-war prospects for Indian raw cotton. For, firstly, an increased yield per acre would automatically lessen the costs of production thereby making cotton growing a business proposition to the producer and, secondly, it would raise the competitive capacity of Indian cotton in the world's markets. Finally, the national aspect of the post-war cotton policy would be to make the industry of cotton production a business proposition for the farmer and the international aspect would be to secure for Indian cotton the right to have export markets on the pre-war *pro-rata* basis.

As regards prices, raw cotton has been the worst sufferer during the past two seasons. Increased and increasing emphasis has been laid on the need to raise the production of foodstuffs and queer and unjust methods have been adopted to discourage the cultivation of raw cotton and to switch over the acreage under cotton to food. No one disputes or has ever disputed the war-time necessity for growing food in adequate quantities in India. But the method of approach to the problem adopted by the authorities has been seriously defective and even vindictive in the case of cotton. To put it bluntly, there is absolutely no need any more to increase the acreage under foodgrains. Even the current acreage is quite enough to produce at least 25 per cent. more of food-grains, provided, modern implements of agriculture and fertilisers are supplied to the farmers at cheap cost. Similarly, and on the same basis, even the presently reduced cotton acreage is quite adequate to produce a crop that will cover both the national and international demand for cotton at relatively economic world prices. Instead of moving in the direction discussed above, the authorities have only placed undue emphasis on the switchover of acreages from cash crops like cotton to food crops and have even placed price deterrents in the way of growing cotton. The most condemnable feature of the grow-more-food campaign and the Bombay Government's " Growth of Food Crops Act " is that the acreage switchovers have been or are sought to be attained at the cost and sacrifice of the cotton farmer and without paying him adequate monetary compensation for the self-denial involved.

In respect of their price policy for the 1944-45 season, the Government of India have gone a step further. They have entirely excluded not only short-staple cottons from their purview, but they have also ignored the ¾″ staples like the Dholleras and Kalagins by not fixing floors for them. In short, the policy of the Government of India appears to be to water down the price level of cotton and to perpetuate the step-motherly treatment offered to it so far. Under the circumstances, one should hardly feel surprised if the ceilings and floors for the 1945-46 season are still further reduced by them under the plea of anti-inflationary effort.

Annual Sports Meeting of the Dawn Mills Sports Club

The Sir Percival David Volley Ball Tournament

THE annual sports meeting of the Dawn Mills Sports Club, Bombay, was held in the Dawn Mills compound on 2nd February at 5-30 p.m. Mr. L. H. Lawford, Managing Director of the mill, presided. A large gathering was present and a specially erected shamiana accommodated the distinguished guests of the evening.

The principal event of the evening was the final match of the Sir Percival David Volley Ball Tournament. This tournament, conducted by the Dawn Mills Sports Club, was open to all clubs in the city of Bombay and suburbs. The Dawn Mills Sports Club and the Delisle Road Welfare Centre met in the finals and the match between them was of a high standard and proved interesting. The Dawn Mills won the match in two straight games, the scores being 15—12, 15—5.

In the first game the Delisle Road Welfare Centre put up a stout fight. Their defence was good but their attack proved ineffective. Their smashes were invariably blocked just over the net by Dwarka, the outstanding smasher and defender of the Dawn Mills team. Encouraged by their victory in the first game, the Dawn Mills played splendidly in the second, and completely outplayed their opponents, who were too tired and nervous to offer any appreciable resistance.

Winners of the Sir Percival David Volley Ball Tournament, 1944—The Dawn Mills Sports Club.

Seated (left to right):—Mr. L. H. Lawford, the Managing Director of the Dawn Mills and Mr. H. Hargreaves, the Manager of the Dawn Mills.

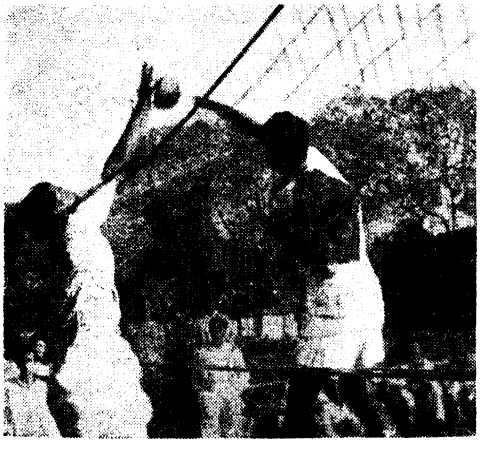
Standing (left to right):—Messrs. K. S. Gill, R. P. Gour, Y. S. Pawar, Keshodeo, Dwarkadas, B. S. Gill (Captain).

Another interesting event was the tug-of-war final between the carding and doubling departments of the mill. Both teams were equally strong and well matched. With grim determination and after a hard struggle, the carding department finally emerged victorious.

The Hon. Secretary of the club, Mr. B. S. Gill, read the annual report, giving a brief description of the various activities of the sports club during the past year.

In giving away the prizes, Mrs. Lawford congratulated and shook hands with each prize-winner. The prizes consisted of shields, cups, medals and even cash prizes, which were attractively displayed on a table in front of the president. Prizes were awarded for carrom (singles and doubles), volley ball, tug-of-war, 100 yards, ½ mile, high jump, long jump and putting the shot. A. Sattar, who secured the highest number of points, was the individual champion and was awarded a special prize.

The rival Captains—left: Mr. B. S. Gill (Dawn Mills) and Mr. Shinde (Government Welfare Centre).


Mr. Dwarkadas (left), a champion smasher from Rajputana supposed to be the best smasher in Bombay to-day in action.

A view of the final Volley Ball match in progress.

After the prizes were distributed, the president, Mr. L. H. Lawford, in a short but humorous speech, expressed his joy and pleasure at having been present on the occasion. He congratulated the prize-winners and wondered whether with his weight he would not have been useful in assisting one of the tug-of-war teams which took part in the final match that evening.

Mr. Lawford was very pleased that the mill was doing so much for its workers in the line of sports, and he hoped that the sports club would develop and flourish as it had done so far with the encouragement of the mill manager, Mr. H. Hargreaves, and through its Hon. Secretary, Mr. B. S. Gill.

He exhorted all the workers to help the war effort by striving hard to increase the production of the mill and promised to write to Sir Percival David, the proprietor of the mill, who was in South Africa at the time, giving him a full description of the evening's function as, he said, Sir Percival was very interested in the affairs of the mill and would undoubtedly be pleased to learn of that successful and enjoyable function.

The Labour Officer, Mr. D. D. Mistry, in proposing a vote of thanks to the chair, referred to Mr. Lawford's genial personality and sporting spirit.

Mr. L. H. Lawford, the president, and Mrs. Lawford, Mr. H. Hargreaves, the mill manager, and Mrs. Hargreaves, were then garlanded, and the function ended with "God Save The King."

Century Spinning and Manufacturing Co., Ltd. Bombay

Welfare Activities in 1944

THE following are extracts from the tenth annual report of the welfare department, Century Mills, Bombay, for the year ending 31st December 1944:—

The activities of the welfare department can be conveniently dealt with under the following heads:—(1) The Employees' Co-operative Credit Society, (2) Education, (3) Entertainment and recreation, (4) Scouts and blue birds, (5) Safety first (instruction and propaganda), (6) Grain Shop, (7) Canteens, (8) Medical, (9) Baby creché, (10) Scripture classes, (11) Sanitation and (12) General.

The Employees' Co-operative Credit Society

The year under report opened with 823 members on the roll. The number of members at present is 1,215, which shows a net rise of 392.

Composition of old debts.—Twenty cases of redemption of old debts were settled by the Welfare Officer for the borrowing members. In most cases creditors were successfully persuaded to reduce their claims in consideration of the interest they had already received from the debtors.

Education

The department conducted night classes for adults in Marathi, Telugu and Hindi. They were examined on the 1st and 2nd February 1944, the examinations being conducted by the Adult Literacy Committee. Certificates were awarded to the successful students.

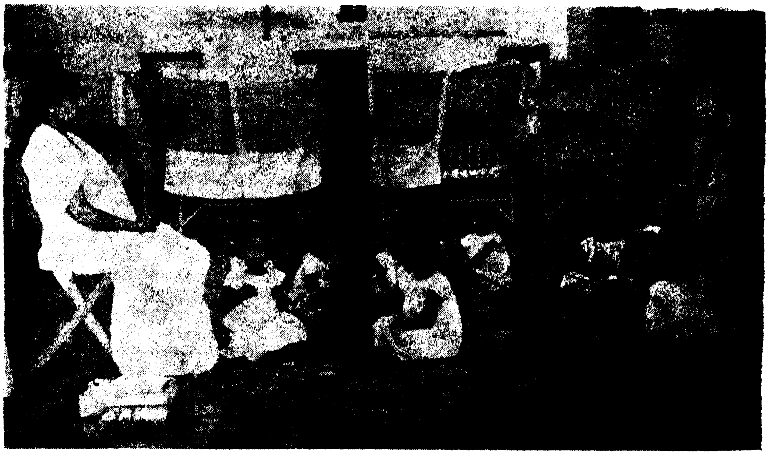
Library and Reading Room.—On account of popularity of the welfare library among mill staff, post-literacy students, scouts, retail cloth shop staff and chawl inmates, books worth about Rs. 500 in Marathi, Gujarati, Hindi and Telugu were added to the library. The use of the library has increased considerably.

Women's Club.—It has 28 women on its roll and attendance is about 16 on the average. The members meet once a week on Friday in the welfare centre. They are instructed in sewing, songs, rangoli, games, reading and writing. Blouses prepared by them were presented to them.

Nursery Class.—This class for infant and little girls from the chawls is in charge of two lady instructors who give them a general training in home crafts like sewing, knitting, cutting, etc., and in the three R's, physical exercises, domestic hygiene and cleanliness. The aim is to help the young ones to form habits of clean and decent living and be useful in their homes.

Entertainment and Recreation

Garden.—Facilities for games and sports of different kinds are provided in a recreation garden in the welfare centre where children of the workmen come to play in the evening.



Baby Creche: Montessori Training Class

Radio.—The radio installed in the welfare centre renders useful service in giving news. The automatic gramophone arrangement also gave useful service in training blue birds and scout boys in advance course of dancing, action songs and drill.

Akhada.—Bhaiyas, Mahars and Marathas gather in the morning and in the evening and have daily physical exercises and wrestling in the *akhada* in the welfare centre.

Three competitors were sent to the inter-mill wrestling tournament held by the Millowners' Association. They got cash prizes, even though none was successful in the finals.

Cricket.—The cricket club of the mills was started in December 1943. About 53 players have joined. The company has given full facility for store and spacious playground. During the course of the year 8 matches were played, out of which the club won 7 matches. Due to shift system of holidays more matches could not be arranged. Mr. T. G. Gadre acted as the Chairman of the club.

Safety First (Instruction and Propaganda)

Twelve meetings of the Safety First Committee were held during the year when 38 accidents which occurred in the mills during this period were reviewed. There were 24 major accidents during the day shift and 14 in the night shift as compared with 38 during the day and 19 in the night shift last year.

Medical

The medical department of the mills continued to function well during the year under report.

The total number of patients treated during the year was 61,658 as compared to 58,851 last year. The mill medical officer paid free visits to the chawl patients who were unable to attend the dispensary. Workers are taking full advantage of the following:—Ultra-violet rays and infra-red rays, spectacles for defective vision, free use of hot water bottle, ice bag, bed pan, urine pots, feeding cups, mackintosh and thermometers, free supply of milk and sweet limes to weak and sick children, and milk to expectant women and mothers.

Creche.—The créche continued to become more popular and proved its utility. This year young children were trained by the health visitor by holding a Montessori class in the creche. She held a class of mothers in the creche and advised them to avoid bad habits such as giving opium, etc., and gave them instructions on sewing, stitching and embroidery. The health visitor with the aid of ayahs took a keen interest in the health and well-being of children and their mothers. The children are given free milk, clothes, toys and picture books.

New Strain of Mulberry Tree in America Helps Development of Sericulture

A UNITED States research specialist in sericulture has developed a new strain of mulberry tree which he believes will contribute to culture of silk in the other Americas.

The specialist is Dr. Vartan K. Osigian, who returned recently to Washington from Venezuela, where some 2,500,000 trees of the new strain which bears his name—*Morera Osigian*—are growing on seven plantations. Silk-worms feed on mulberry leaves.

A citizen of the United States, Dr. Osigian was born in Armenia, and is the seventh generation of his family to carry on research in silk. He has been interested in developing sericulture in the Western Hemisphere for nearly 20 years. He has been working in the Estacion Sericola El Pinar, at Caracas.

He expressed the opinion in Washington that conditions for growing silk in Latin America are favourable.

According to Dr. Osigian, the mulberry tree he has developed produces a crop of leaves in six months—leaves which he says are more tender, have more sap, and are six to eight times as large as the usual leaf.

Dr. Osigian explained that the silk-worm has five senses and is discriminating in its choice of food. The baby larvæ prefer chopped leaves. Dr. Osigian said a silk-worm placed on the usual leaf will go to one from the new type of tree placed nearby.

Dr. Osigian claims that the silk-worms feeding on the new type of mulberry tree form cocoons larger than usual, producing about 3,000 yards of silk filament instead of the 1,000 to 1,500 yards usually produced.

Dr. Osigian also is responsible for the discovery, in 1915, of a process for producing coloured silk.

Eggs of a silk-worm which has spun scarlet silk, Dr. Osigian says, will produce more silk-worms which spin scarlet thread. One spinning a golden-yellow filament will produce another generation of yellow-thread spinners.

Besides Venezuela, many other hemisphere countries have begun silk production or experiments in sericulture. In Brazil raw-silk production has reached 500,000 pounds a year.—*Foreign Commerce Weekly.*

Commercial and Technical Organizations

Indian Merchants' Chamber, Bombay

Annual General Meeting:—The following are extracts from the speech of Mr. M. A. Master, President, delivered at the thirty-seventh general meeting of the Chamber, held on Wednesday, the 31st January 1945:—

Taxation Policy Needs Revision

" Sir Ardeshir Dalal does not seem to share fully the view of the commercial community that the existing policy of taxation does not enable industries to accumulate such reserves as would assist them in meeting the cost of re-equipment, rehabilitation and future expansion. The authors of the Bombay Plan in their Second Report have, however, remarked that in any scheme of future taxation that may be evolved 'it is necessary to emphasize that adequate remission should be granted in respect of the depreciation of the assets employed in production and that incomes ploughed back for increasing industrial or agricultural production should also be granted similar remission.' Satisfactory as this suggestion is, it is necessary to emphasize that the policy of taxing industries on the present scale does not leave with them the reserves which are badly needed both for re-equipment as well as for expansion. One may legitimately ask how the industries should finance their programme in the future for this purpose. For instance, if a spindle cost a mill Rs. 50 and a loom Rs. 800 before the war, and if the same spindle were to cost that mill Rs. 200 and a loom Rs. 2,500 during the coming years, can it be said that the policy of taxation has allowed the textile industry to accumulate such reserves as would enable them to finance their programme of rehabilitation and reconstruction? One should not expect that such programme should be financed by further borrowings. That is bound to affect the economic structure and the financial strength of the existing industries. It should not be forgotten that industries in other countries have financed their programme of expansion out of the profits that they have already made. Unless, therefore, the existing policy of taxing industries is so revised as to enable them to provide adequate depreciation, calculated on the basis of replacement, and would place them in a position to build up sufficient reserves after the payment of taxes for their future expansion, not only will the existing industries find it difficult to maintain their financial stability but it will also make it almost impossible for future industries even to withstand foreign competition in spite of protection. I would, therefore, most earnestly appeal to Sir Ardeshir Dalal, who has vast experience in these matters, to urge upon the Government of India to evolve such a policy of taxing industries in the future as will enable both the existing and the future industries to grow and expand out of the profits that might be made by them under the policy of protection, when necessary, in the true interests of this country."

All-India Organization of Industrial Employers, Bombay

The following are extracts from the presidential speech of the Hon. Sir Rahimtoola M. Chinoy at the twelfth annual session held towards the end of January 1945:—

" During the current year, the war situation has completely changed, and the final victory over the enemy is now within sight. The war situation, as it has improved in the West, had led the Western countries, particularly the United Kingdom and the United States of America, to devote many months back their attention to the problems of making a beginning in the changing over from war economy to peace economy. In the U.S.A. many factories and industrial centres were released from obligation to manufacture for war purposes. Many more would have been released but for the temporary delay in the advance of the Allied armies in the Western Front. The fact that with the defeat of Germany the process of reconversion would immediately take place, as is evident from the recent Lease-Lend Agreement between the United Kingdom and the United States of America, should naturally lead us in this country to concentrate our efforts towards taking initial steps in switching over our war economy to peace-time needs. I very much apprehend that, while the United Kingdom and the United States would have already started manufacturing on a large scale for civilian and even export markets, we in India might continue to be handicapped on account of the Government of India being compelled to continue the rigour of war-time controls and justify the same as long as war with Japan continues, with India as the base of operations. As a result, Indian industry would not be enabled to meet India's own civilian demand, while foreign producers will commence exporting their goods to this country. Civilian demand—starved as it has been during the war because Indian industry was not allowed to increase production of civilian goods, and accumulated as it has—would be met by foreign producers, while Indian industry will remain in the strait jacket of rigid war-time controls and regulations. This will make it extremely difficult for Indian manufacturers to resume full contacts in their own market. It will indeed be a tragedy if the Government of India fail to realize sufficiently early that transition from war to peace in India should be timed with that in other countries.

Reconversion Problems

" While it is true that the post-war reconstruction plans for India, whether envisaged by the industrialists or by Government, or even by other economists and public men, would include a measure of Government control and regulation, there is great deal of misconception in regard to the nature and the necessity of controls. In the U.K., and particularly in the U.S.A., although planning for post-war reconstruction is accepted to be essential, the maintenance of private enterprise—free, uncontrolled and fully competitive—is being cherished. This is a legitimate reaction of the industrial and business community against war-time restrictions which they have accepted as necessary for mobilizing the resources of the country for a total war. We in this country have also been subjected to controls and restrictions which, though justifiable on account of war needs, cannot be said to be so devised, or even so administered, as to leave adequate scope to the industrialist for maintaining higher production, be it for war purposes or be it for essential civilian needs. Therefore, the first step—and this step should be taken as soon as possible—is to revise and rationalize all the controls over industry and trade, so as to help the process of reconversion which should be taken up without delay. I am afraid that the problems of reconversion are not fully appreciated in this country, at least not so fully as are the problems of reconstruction. It must be realized that reconversion should be planned in the same manner as the post-war reconstruction is being planned in this country. The first step towards reconversion is to allow the industry to switch-over to civilian production and thereby restore the existing industries in the country in their normal setting of overall industrial expansion. Controls hitherto have been restrictive. Controls should now be revised so as to help expansion. Unless this is done, I am afraid, our post-war planning would suffer for want of faith in the utility and benefits of controls. I am fully aware that the post-war planning, as it is envisaged in this country, would require a degree of Government regulation and control. Industries, such as munitions and armaments, might be entirely owned and managed by the State. Ownership and management of other industries, which are essential in the national interest but for which private capital may not be forthcoming, might also rest with Government. Government may further take over the ownership and control of certain large-scale industries of great national importance, which are beyond the resources of individual capitalists, and the industries which are likely to become monopolistic may also be run by the State. In spite of all this, it is evident that private enterprise will have an expanding sphere of operation. It may, in all wisdom, be proper to control the free play of private enterprise and initiative, at least in the primary stage of the post-war policy of our Government, but once the specific purpose is served, the basic requirements of continuing the system of private enterprise would be more fully appreciated. Of course, it is understood that whatever may be the degree of Government control, regulation, or even ownership and management of industries in the country, the Government should be a fully national one. No Government which falls short of our conception of a National Government can be vested with extraordinary powers affecting our industries. India, at the moment, is far behind the stage and the question is not whether the State control is absolutely necessary, but that, because the State does not belong to the citizens, the control would merely be the British control. The need for such a National Government is all the greater during the transition period, because it would entail sacrifices which a National Government alone could call upon the people to bear.

Future of Controls

" Controls hitherto have had only one objective, that is, to feed the war needs. Controls, during the reconversion phase, should simultaneously have another vital objective, namely, that of allowing industry to take up production for civilian market. Scarcity of essential materials, such as coal, raw materials, mechanical equipment, machinery, machine-tools, etc., should be forthwith met through local production; and if local production is incapable of meeting the same, imports should be immediately provided for. In regard to coal, I would like to mention that, instead of supplying the needs of the domestic industries, Indian coal of high grade quality is still being used for bunkering purposes of the British naval and merchant fleets at the Indian ports. I would earnestly urge upon the Government to prevail upon the United Nations, particularly the United Kingdom, to meet their increasing requirements of bunkering coal from sources other than Indian coal. In any case, this demand should not be met at the cost of industrial production in the country which has already suffered on account of several factories being compelled to close for want of coal supplies.

" Once the competitive conditions begin to emerge, the Indian industrialists will have to look into their cost of production if they are to face the competition, particularly with the foreign countries which have already taken steps in this direction. I would particularly urge upon the textile industry to study the problems of rationalization and take steps to achieve this. In the process of rationalization, we may find that our industrial equipment, which has been worn out almost completely during the last five years of war, would need to be replaced. Capital shall have to be found for such a replacement. We shall have to approach capital goods manufacturing countries for finding the replacement machinery. Foreign exchange will have to be found for that purpose. New technological developments, particularly those that have taken place in America, shall have to be taken into account.

Taxation

" If industries in India are continued to be burdened with the war-time taxation which has left very inadequate and lean depreciation and reserve funds in the hands of the industries, I am afraid that Indian industries would neither be able to achieve any rationalization nor compete on equal terms with the foreign producers. In this background the principle that war-scale of taxation should be continued for the sake of post-war reconstruction, as was indicated by His Excellency the Viceroy in his address to the Associated Chambers of Commerce, would not be acceptable to the country which has borne a burden of war cost far beyond its capacity—a cost over which the Indian public had neither any say nor any control. It must, therefore, be made clear that the very foundations of reconversion, as also of our post-war reconstruction, would be sabotaged if industrial expansion is hampered by high taxation which only the emergency of war has so far justified. The present level of taxation on industry is acknowledged by all authorities to be more burdensome than the Indian industries can bear. The present level of taxation needs revision, particularly in respect of granting larger allowances for depreciation and replacement funds. In making a plea for granting taxation relief to the industry adequate to the needs of reconversion and rationalization, I am fully conscious of the fact that our post-war reconstruction plans would demand sacrifice from the people, as also from the industry. The financing of our post-war plans would need huge funds, but these funds need not be provided from taxation only. Furthermore, even if higher taxation may be needed, the sources of taxation need not be the same as were exploited during the war. In fact, for our post-war reconstruction purposes, the whole of our taxation system shall have to be revised and rationalized. It must be elastic and it must help economic expansion. As the economic expansion takes place, the sources of revenue will be more varied and each source will yield larger revenue than what it used to yield before the war.

Exports

"I would recommend to the manufacturers and exporters to form export associations, the functions of which would be to study the requirements of our customers and to see that the standard and quality of our goods—whether raw materials or manufactured goods—are well-maintained. Such associations should be enabled to certify the quality and standard of goods. Simultaneously, the Government should see that our customer countries are well provided with able and energetic Trade Commissioners who should be drawn preferably from business. The principle that Trade Commissioners' Organizations should be equipped with able personnel having commercial experience and knowledge, has been recognized by the United Kingdom and the U.S.A. India has suffered for want of adequate facilities, and particularly for want of able personnel in our Trade Commissioners' Organizations.

Labour Welfare

"The essential requisite for implementing plans of labour welfare and social security is to make sure that industry is made capable of bearing the burden which would be involved thereby. Indian employers have sympathized with the measures contemplated by Government in respect of holidays with pay, or in respect of sickness insurance and social security. In fact, many employers have been voluntarily giving benefits and facilities to labour in these matters. We have unequivocally expressed our view that we are willing to bear our share of the burden of sickness insurance, as soon as a satisfactory scheme providing for an equitable distribution of the burden between the State, the employers and the workers has been evolved."

Textile Stores and Machinery Merchants' Association, Bombay

Third Quarterly Meeting.—The following are extracts from the speech of the President, Mr. R. M. Nanavati, at the third quarterly general meeting held on 5th January, 1945:—

"We can have one great relief in the statement made by H.E. the Viceroy that India's sterling debt will be honoured and upon discussion and negotiation, we can have payments in instalments, which will enable us to buy our requirements of capital goods from U.K. Manufacturers in U.K. and U.S.A. are quite ready to book orders for machinery. It will be second-hand, of course, in the sense it has been used, but it will be in first class condition and will represent the latest in scientific development. A special officer is being appointed in the Indian Department of Commerce in Washington to facilitate the importation of heavy machinery and capital goods for India's post-war development. However, British goods are supposed to be much cheaper than American, and if Indian business men will further delay in booking orders, the British industrialists who are conscious of the fact that America is attracting Indian attention, will send a British Manufacturers' Mission to India to establish trade contacts with Indian industrialists. They have not done so hitherto, because since about six months, the delegation of Indian industrialists are preparing to proceed to U.K. and U.S.A. During this war, the British and Americans have expanded their industries and after the war they will continue to enhance their production for securing employment. In order to liquidate the debts incurred in this war, they will also make substantial increases in exports. They expect that India's huge surplus sterling balance should be considered as having been paid over to them in exchange for their capital and consumer goods which may be delivered to us in future as and when convenient to them and at prices as may be charged by them."

Priority for movement of Millstores, Dyes and Chemicals.—A circular was issued by the Textile Commissioner on 20th July 1944 revising the previous list of stores exempted from the necessity of obtaining priority certificates for transport to textile mills by rail.

(*a*) The Association drew the attention of the Textile Commissioner to the fact that in the above circular, facilities to transport goods were given only in such cases where the goods were consigned to textile mills and the same facilities were not permitted when goods were consigned to handloom weavers. They requested the Textile Commissioner to extend the same facility to the handloom weavers who were mostly uneducated and further requested him to permit recognized and established suppliers to forward goods to handloom weavers without priority assistance.

The Textile Commissioner informed the Association that their suggestion could not be accepted due to administrative difficulties. He assured them that no genuine case of transport of millstores was refused and every care was taken to see that facilities for transport were provided. The restrictions had to be imposed as the facilities given in the past were abused. He further suggested that if any merchant experienced genuine difficulties in getting his consignment moved to handloom weavers or to any other genuine dealer in any part of India, they should kindly inform such parties to contact the Textile Commissioner's office when necessary steps would be taken to assist them.

(*b*) *Facilities for transport of tapioca powder.*—The Association requested the Textile Commissioner to grant facilities for the transport of tapioca powder from production centres in the south to Bombay and up-country mills. As movement of tapioca powder without priority was possible, the Textile Commissioner informed them that it was not necessary to grant special assistance in the matter. The production centres are given facilities to rail tapioca powder to Cochin from where the consignments are shipped to ports.

They also addressed the Textile Commissioner requesting him to extend the same facilities as were granted for the transport of 13 items of millstores, etc., to the following articles of millstores which were equally essential for textile mills and factories.

(i) Healds and Reeds, (ii) machinery cloth, (iii) leather belting, roller skins and picking bands, (iv) ropes, tapes and bandings.

The Textile Commissioner informed them that the items mentioned above could not be included in grade " A " and, therefore, applications on form " A " would have to be submitted to his office when necessary action would be taken.

Andhra Chamber of Commerce, Ltd., Madras

Conference of its Affiliated Bodies, etc.—Under the auspices of the Andhra Chamber of Commerce, a conference of its affiliated and other Andhra commercial bodies, etc., was held on the 29th, 30th and 31st December, 1944. Mr. S. V. Ramamurthy, I.C.S., Adviser to H.E. the Governor of Madras, opened the conference, and Mr. C. Seshachalam, M.A., B.L., President of the Chamber, presided. Several important subjects relating to controls, food problem, transport, taxation, post-war reconstruction, etc., were discussed at the conference.

The following resolutions, among others regarding the textile control orders, were passed at the conference:

" This conference resolves that, while the time limit of six months for the opening of the bales be retained, the time limit for the disposal of the goods by retailers be abandoned."

" This conference is of opinion that monopoly or invitee system deprives several merchants of their legitimate function in the trade in piecegoods and recommends to the Provincial Textile Commissioner to distribute the fixed quota goods to as many merchants as possible who are the real quota holders and thereby maintain a uniform policy of distribution."

" This conference is of opinion that a net per centage of twenty must be allowed by way of profits as the same is to be divided between three merchants and the provincial sales tax be over and above the fixed 20 per cent."

" This conference recommends to the All-India Commissioner through the Provincial Textile Commissioner to induce mills to manufacture only such varieties of cloth as are needed and not to manufacture unwanted cloth and thereby make the retailers suffer, as they cannot force the consumers to accept their choice."

" This conference requests the Provincial Textile Commissioner to enforce a scheme to ensure sufficient bales of grey and bleached longcloths, mulls, *khadis*, etc., to the colour cloth manufacturers in all the important centres for hand-printing and dyeing purposes from the quota holders all-round the province."

" This conference is of the opinion that the disparities in ceiling prices of certain qualities and especially in printed goods popularly known as 'Karkhana chints' are very apparent and the textile authorities have not taken any pains to eradicate this and hence this conference urges the Provincial Textile Commissioner to investigate the matter thoroughly and get it rectified as early as possible."

" This conference requests the Provincial Textile Commissioner to constitute District Committees comprising merchants, consumers and officials to advise the Government on all important matters regarding textile control orders including launching of prosecutions."

Bengal Millowners' Association, Calcutta

Second Quarterly Meeting.—The following are extracts from the presidential speech of Mr. R. N. Dutt at the second quarterly general meeting of the Association held last month:—

The joint efforts of Government and the textile industry in bringing down the cloth prices, have, I am happy to say, been crowned with a large measure of success. I would refer to the action of the Government of Bengal in bringing the quota system into operation with effect from November 1944. The Provincial Government deserves to be congratulated for this wise course of action, thereby helping to maintain normal channels of trade. I may point out that I impressed on the Hon'ble Minister for Civil Supplies during my recent interviews the necessity of maintaining normal trade channels and of fixing quotas between dealers and dealers. I hope that the Provincial Government would also release the finer counts through normal trade channels in the usual course.

"It will be recalled that during the recent visit of the Textile Commissioner to Calcutta and the discussions which your committee had with him, it was pointed out that the quota allocated to the Bengal area was insufficient to meet the full requirements of the province. The Textile Commissioner had then informed the Committee that the Government of India had fixed provincial quotas on a basis of 12 yards of cloth per head. Your Committee impressed on him the acute shortage in Bengal due to various factors such as the diversion of appreciable quantities of cloth for the manufacture of ready-made garments for the military and auxiliary personnel and to meet the requirements of Red Cross and other hospitals. The Committee also drew the attention of the Textile Commissioner to the exports of cloth from Bengal to certain countries like China. I have now learnt with great disappointment that the Textile Commissioner has arrived at some tentative pre-war consumption figures of cloth in the various provinces according to which Bengal has been allocated cloth on the basis of 10.45 yards per head. I am not aware as to the basis on which these consumption figures of cloth have been calculated. I may point out that the production of handloom cloth was a very big factor which supplemented the cloth consumption in normal times. It is estimated that fall in handloom production has been 30 per cent. below normal due to difficulties in getting yarn supply. In any case, the increase of military and auxiliary forces in Bengal have vastly added to the requirements of the civil population. Allocation of cloth to Bengal on the basis of 12 yards per head of the population is, as it is, quite insufficient to meet the requirements of the province.

As regards the urgent and varied problems that will face the Indian textile industry during the post-war period, I do not think it is necessary for me to prove the necessity for the announcement of a definite and positive policy by Government with regard to the post-war reconstruction of the Industry. One of the most pressing problems of the textile industry in the immediate post-war period would be the modernization and replacement of worn-out machinery. It is only if the Government of India come forward with active help in securing priorities by agreement with the the respective Governments that our industry can expect to replace a substantial part of their machinery requirements. Apart from this the Government of India's help is needed in enabling the cotton mills to accumulate adequate reserves for post-war replacements of machinery when much higher prices will have to be paid. This would involve depreciation allowance on a more generous scale than has hitherto been done. In this connection I consider that the scheme submitted by the Bombay Millowners' Association suggesting to the Government the grant of depreciation allowance at the rate of 10 per cent. for single shift, 20 per cent. for double shift and 25 per cent. for three shifts is quite reasonable. Moreover, I appeal to Government to earmark a higher portion of the E.P.T. profits for the post-war reconstruction of the industry. This is necessary in view of the special difficulties with which the industry is bound to be faced in the post-war period."

Karachi Chamber of Commerce, Karachi

Distribution of Cloth.—The Chamber has represented to the Textile Commissioner, Bombay, that the quota for Sind should be increased from 12 yards to at least 18 yards per head, which was understood to be the level of the allotment to Bombay and the Punjab. The Chamber submitted that 12 yards per head was definitely much below the normal consumption in Sind, and that 18 yards was the minimum necessary to meet actual requirements to adequately clothe the population. Further, there appeared to be no justifications for Sind receiving less than Bombay or the Punjab.

Upper India Chamber of Commerce, Cawnpore

Excess Profits Tax: Post-War Taxation on Profits of Industry.—The Associated Chambers of Commerce of India passed the following resolutions at the annual general meeting held in December last:

"This Association urges the Government of India to give an assurance to industry that, on the termination of excess profits tax, all revenue expenses incurred or accrued in earning these excess profits but not already included as a charge because of their indeterminate nature will be allowed as a deduction in computing the final liability to excess profits tax and that refunds of such tax in adjustment thereof will be made should the tax have been removed."

Constituent chambers have been informed that the following reply had been received from the Government of India:—

"In moving the resolution Mr. Younie asked for an assurance such as that given in the House of Commons by the Chancellor of the Exchequer, viz., that steps will be taken to see that all expenses of a revenue nature which have been incurred in earning the excess profits will be allowed as a deduction in computing the liability to excess profits tax. I am directed to say that the Government of India give such an assurance but that they are not prepared at this stage to commit themselves to any detailed proposals for giving effect to the assurance."

All-India Handloom Board.—Towards the end of May, the Director of Industries, United Provinces, invited the views of the Chamber on the subject of the setting up of an All-India Handloom Board.

The Director of Industries was informed that the proposed All-India Handloom Board could, undoubtedly, do very useful work on behalf of the handloom industry. It was, however, envisaged that an unwieldy Board of the description indicated in the Government of India's letter would not be able to give the industry the direct help it required (particularly in the varied and widely separated handloom districts), and also that the problem was one which could, to better advantage, be handled by Provincial Governments. It was accordingly suggested that, if an all-India Board was constituted, local Boards should also be formed in the various Provinces and States. It was thought that the latter would ensure closer contact with the local handloom industry and would be able better to appreciate their peculiar difficulties and report thereon to the all-India Board.

Association of Indian Importers of Dyestuffs, Bombay

Annual General Meeting.—The third annual general meeting of the Association was held on Saturday the 27th January, 1945. Mr. Khatau Valabhdas, President, presided. In a suitable speech, the President moved the adoption of the annual report and accounts for the year 1944. The Vice-President, Mr. K. H. Kabbur, seconded the motion, which was carried unanimously.

After some general discussion, the following persons were elected office-bearers for the year 1945:—

President: Mr. K. H. Kabbur. *Vice-President:* Mr. R. J. Mistry. *Members of the Committee:* Messrs. Khatau Valabhdas, S. Sheth, J. H Doshi and Chotalal Marfatia.

TRADE LETTERS

(From Our Special Correspondents)

Ahmedabad

AHMEDABAD cloth merchants who have adopted the quota system on the lines of the Government quota system have been merrily carrying on their trade while Bombay cloth merchants have been ousted by Government. Government, too, appears to be quite satisfied with the working of the quota system of the Ahmedabad cloth merchants who have secured the approval of the Textile Commissioner. While Bombay goods move slowly to the deficit zones owing to the interruption of the trade channel, Ahmedabad goods move quickly to the deficit zones through the usual trade channel. A complaint has been made by the Government agents of deficit zones of non-receipt of goods from Ahmedabad merchants, who state that as their goods have not been frozen by Government they are not bound to give goods to Government agents who are not their quota holders. As time passes, Ahmedabad merchants are perfecting their system of distribution. They have employed a special staff to supervise the working of their system, and if any breaches are detected, they are heavily fined. The association of the wholesale merchants known as the Maskati Cloth Market Association has frozen the stocks of all its members and distributes them to their quota-holders by varieties. There is thus no loophole left to individual merchants for black marketing.

Government is said to be devising a new scheme of distribution of cloth whereby surplus and deficit areas will be placed on the same level of 18 yards per head. Surplus areas will feel the same pinch as the deficit areas. To mitigate the hardships of both the areas Government is said to be contemplating a scheme to encourage spinning of yarn both by hand and machinery for handloom weavers. What China has done India can do if the people have the will to produce cloth by plying handlooms and spinning wheels which do not require any great skill or implements which cannot be available. If hand-spinning cannot yield sufficient yarn, Government is prepared to give facilities for importing spinning machinery and erecting spinning mills. India will have to clothe the world for some time, and she should utilize the opportunity fully to produce more cloth.

Textile Labour Association

While the need for greater production is felt more than ever before, the Textile Labour Association has threatened the local textile industry with a general strike if its demands for bonus, compensation for stoppages due to coal shortage and special facilities for night-shift workers are not settled through conciliation or arbitration. We don't think Government will allow a general strike in the midst of a war, and may persuade the Ahmedabad Millowners' Association to accept the arbitration of the Industrial Court as it did on the outbreak of war on the question of dearness allowance. Ahmedabad workers who have been getting the highest dearness allowance and basic wage in India, will succeed in extorting a few more concessions during the war, but after the war is over, they will have to face a cut which the millowners were persistently trying to effect before the war. They did not succeed as far as their brother millowners in Bombay and other places did, as they were confronted with a system of arbitration evolved by Mahatma Gandhi. They scrapped this system of arbitration as soon as the Industrial Disputes Act was passed with its provision for voluntary arbitration of the Industrial Court. They have accepted the latter during the war, but after the war they will not accept it unless it is made compulsory by Act like conciliation.

The Labour Association is preparing the workers for a grim struggle with capital if it is precipitated. It is drawing within its fold all the workers who have not joined it. Its membership has reached 65,000 out of the total number of 130,000 workers. It tried to collect their savings by a scheme of compulsory savings, but the Millowners' Association refused to accept it. Now it has approached Government to sanction its scheme of savings and has opened a co-operative bank for the purpose. Better organized and financially better-off Ahmedabad workers will offer a tougher fight to their employers after the war than before the war if they are forced to it. But if they are properly trained and housed, they will be an asset to the industry which will be better able to stand post-war depression. Nobody, however, thinks of training and housing labour for the good of the industry. When the post-war depression starts, efficiency of labour will help the industry, not a struggle between capital and labour, which will rudely shake the industry. In spite of the highest wage-bill which it has been paying, the Ahmedabad industry has progressed and will continue to progress if labour is efficient. The continuous flow of labour to Ahmedabad industry is maintained by the high wages which it gets in spite of the housing and other difficulties. Any attempt to cut wages will, besides precipitating a struggle with labour, interrupt the flow of labour to Ahmedabad industry which will experience shortage of labour. Abundant supply of labour is essential for raising the efficiency of labour to a high level. It is advisable for the Millowners' Association and the Labour Association to collaborate in a scheme for the efficiency of workers on which the post-war fate of the industry depends.

South India

Textile Control in 1943-44 in Madras

ONE of the most important duties which the Madras Textile Control Department undertook during 1943-44 was in connection with the administration of the Cotton Cloth and Yarn (Control) Order, 1943, promulgated by the Central Government in June 1943. Adequate arrangements were made in the province to enforce strictly the provisions of this Order, especially the anti-hoarding and price control provisions. The province had already built up an efficient licensing system, prior to the promulgation of the Cotton Cloth and Yarn (Cortrol) Order, 1943, by the Central Government.

Under an agreement with the millowners yarn required for the Government collective weaving centres and weavers' co-operative societies was supplied by the mills regularly at panel prices. With a view to safeguarding adequate supplies of yarn to handloom weavers outside these approved organizations, the Madras Government promulgated in March 1943 an important order prohibiting the export of yarn from the Province except under permits issued by the Provincial Textile Commissioner, Madras.

The collective weaving centres and Madras Handloom Weavers' Provincial Co-operative Society, Limited, Madras, produced and supplied for war purposes large quantities of towels, handkerchiefs, bandage, bunting and gauze cloths, dusters, etc.

The Government Textile Institute, Madras, was reorganized so that it might contribute the maximum practical assistance to the handloom industry. A gazetted officer, designated as "Tinctorial Chemist," was appointed for research on the extraction, standardization and use of vegetable dyes. This officer collected information regarding dye materials which are readily available in large quantities and conducted preliminary experiments on the nature of some materials so collected with reference to fast dyes, mainly for cotton. The experiments so far carried out indicate that gun kino and cashew shell liquid can be satisfactorily used for dyeing, especially for printing cotton cloth or yarn. The shades that could be obtained from the former are grey, brown, yellow, deep violet and red; and from the latter, violet, orange and red.

The quantity of mill-made standard cloth allotted to the province during May 1943 to July 1944 was 863 lakhs of yards. The sales upto the end of March 1944 were 291 lakhs of yards.

Collective weaving centres were originally organized to produce war textiles. Work in these centres was directed to meet civilian requirements. There were at the end of the year 13 centres in Salem, Ramnad, Bellary, Tinnevelly, Cuddapah, Kurnool, Guntur, Chitoor, East Godavari and Tanjore Districts. The number of looms in these centres rose from 1,420 to 6,178 towards the end of August 1943 and fell to 1,783 at the end of the year. All the centres worked at a profit.

Two schemes, one at Dharmavaram and the other at Cannanore, were worked for some time during the year through master weavers for the production of cloth to meet civilian requirements.

Export of Cloth for War Purposes

The Provincial Textile Commissioner in Madras has issued the following notification to the textile mills in the Province:—

"Under the first proviso to clause 3 of the Madras Cotton Cloth (Exports) Control Order, 1945, the Provincial Textile Commissioner, Madras, hereby authorizes the transport without a permit, by any textile mill in the province of Madras, of cloth manufactured by it for war purposes of which it is bound under clause 18A of the Cotton Cloth and Yarn (Control) Order, 1943, to deliver to its quota-holders at their place of business within the limits of the South Deficit Zone as specified in the General Permit notified by the Central Government for the purpose of the Cotton Cloth Movements Control Order, 1943.

"Any consignment of cloth transported by a textile mill under this general order shall be covered by a certificate in Form III in the Schedule to the aforesaid Control Order, duly signed by the agents or the manager of the mill.

"Under clause 9 of the Madras Cotton Cloth (Exports) Control Order, 1945, the Provincial Textile Commissioner hereby authorizes the officers specified below to exercise within their respective areas the powers of demanding information from and of giving instructions to holders of permits issued under the said Control Order."

Designation of Officer :—Area within which the powers may be exercised. (1) All Assistant Textile Commissioners—Throughout the Province. (2) Personal Assistant to the Provincial Textile Commissioner, Madras—Throughout the Province. (3) Textile Control Officers—Within the districts or portions of them over which they have jurisdiction. (4) Textile Assistant attached to the office of the Provincial Textile Commissioner, Madras. (5) Market Assistant attached to the office of the Provincial Textile Commissioner, Madras—Throughout the Province.

Food Crops on Land Intended for Mulberry

In connection with the cultivation of mulberry on waste lands in Kollegal taluk in Coimbatore district, the Government of Madras have made a concession to "the landless poor," that is, to ryots who are unable to take more than four acres for cultivation. This is *apropos* of the permanent assignment of 10,000 acres, in compact blocks of assessed and unassessed waste lands, in Kollegal taluk. The Government issued the assignment order in December 1943, in view of the importance of sericulture industry. The assignment order stipulated that ryots to whom a permanent assignment was made should grow only mulberry on those lands. Government have now relaxed the condition, so as to permit the "landless poor" to grow food crops to an extent not exceeding one acre out of the area assigned in each case for planting mulberry.

Export of Cloth from Madras Province Controlled

The Madras Government have promulgated the Madras Cloth (Exports) Control Order, 1945. It extends to the whole of the Province of Madras and came into force from 10th January 1945. The Order lays down that no person shall, on or after 10th January 1945 transport cloth from any place within the limits of the Province to any place in India outside the Province, except under a permit issued by the Provincial Textile Commissioner, Madras. It is, however, provided that the Commissioner may by general or special order, authorize such transport without a permit by any textile mill, of cloth manufactured by it for war purposes or which it is bound under clause 18A of the Cotton Cloth and Yarn Control Order of 1943, to deliver to its quota holders at their place of business within the limits of the South Deficit Zone.

Technological Education

The Madras Government have sanctioned a grant of Rs. 10 lakhs and a recurring annual grant of Rs. 2 lakhs to the Annamalai University for starting an Institute of Technology and a College of Engineering in the University. The College is expected to function from July next.

Cotton Production and Prices : Government Report

In a Press Note issued by the Madras Government on cotton production and prices the Department of Civil Supplies says that pickings of the Mungari or early sown crop are in progress and the yield is expected to be generally below the normal. Heavy and continuous rain in November 1944 are reported to have arrested the growth of the crop in the central districts and in the south. The plants are reported to be improving with the subsequent bright weather. The condition of the crop is generally satisfactory in the other districts of the Province.

The average wholesale price of cotton lint per imperial maund of 82 2/7 lbs. as reported from important markets on 6th January 1945, was Rs. 27-3 for Cocoanada, Rs. 19 for White Northerns, Rs. 24-11 for Red Northerns, Rs. 16-11 for Westerns (Mungari), Rs. 21-3 for Westerns (Hingari), Rs. 50-15 for Coimbatore (Cambodia), Rs. 44-15 for Coimbatore (Karunganni), Rs. 34-2 for Nadam cotton, Rs. 40-15 for Virudhunagar (Southern) Cambodia and Rs. 27-13 for Tinnevelly cotton. When compared with the prices on 9th December, dealt with in the last report, the prices reveal a rise of approximately 10 per cent. in the case of Cocoanadas, 25 per cent. in the case of Red Northerns, 2 per cent. in the case of Coimbatore Cambodia and 5 per cent. in the case of Coimbatore Karunganni and a fall of approximately 2 per cent. in the case of Westerns (Mungari) and (Hingari), the prices remaining stationary in the case of White Northerns and Nadam cotton.

Experiments on Diesel Oil Engines

The Government of Madras have issued the following Press Note:—"Experiments were carried out recently at the College of Engineering, Guindy, on running diesel oil engines with the combination of producer gas from charcoal and groundnut oil and that the investigation was far more important than the running of diesel oil engines on groundnut oil alone. The tests have been carried out and the following conclusions are drawn:—

The conversion of oil engines to run on suction gas should be confined to high speed diesel engines. The conversion depends upon the availability of gas producers. Until a reliable gas producer is developed for use with inferior fuels, charcoal gas producers manufactured in India for automobile engines are recommended for use with high speed diesel engines. The running of high speed diesel engines on charcoal gas with groundnut oil or high speed diesel oil is recommended in preference to running them on charcoal gas with magneto or coil and battery ignition. The running of high speed diesel engine in the above manner requires the provision of efficient and suitable type of carburettors. The carburettor should be connected to the pipe intake of the engine. Engines which do not have a pipe intake must be provided with a suitable fitting. Single-cylinder engine must be provided with an anti-pulsating device such as a 40-gallon drum introduced in the gas plant. Twin-cylinder and multi-cylinder engines do not require such a device. In order to ensure the highest percentage of fuel oil, the gas, air and oil control valves should be adjusted for each particular load in the adjustment of these valves, the important point to note is to give the engine maximum quantity of gas and minimum quantity of oil consistent with steady and smooth running of the engine. The highest percentage of groundnut oil savings in the 12.5 h.p. Lister high speed diesel engine when the gas, air and oil control valves were adjusted in the manner was 69 at 8.12 h.p. which was maintained up to 10.4 h.p. This figure can be improved if the engine is of a multi-cylinder type similar to an auto diesel engine. The conversion of high speed diesel engines to run on charcoal gas should be carried out by a reliable engineering firm, who have the technical personnel to design suitable carburettors and who have the experience and equipment for manufacturing gas producers in order to ensure the conversion to be a success.

All persons interested in the experiment who desire to get further details may get them from the Principal, College of Engineering, Guindy.

Raw Cotton Statistics

The receipts of loose cotton at presses and spinning mills in the Madras Province from 1st February 1944 to 12th January 1945 amounted to 497,323 bales of 400-lb. lint as against an estimate of 458,700 bales of the total crop of 1943-44. The receipts in the corresponding period of the previous year were 422,352 bales; 688,181 bales mainly of pressed cotton were received at spinning mills and 5,076 bales were exported by sea, while 230,430 bales were imported by sea mainly from Karachi and Bombay.

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Egyptian Cotton Market

Second Crop Estimate

THE Ministry of Agriculture, Alexandria published, on 4th December, 1944, the following *second estimate of the* 1944-45 *cotton crop:*

	Unginned cotton		*Ginned cotton*	
	Total crop Cantars	Average yield per feddan Cantars	Total crop Cantars	Average yield per feddan Cantars
Long staple cotton— Longer than 1⅜" (Maarad, Malaki, Amon Karnak, Menufi, Giza 7) ..	3,203,000	4,63	3,349,000 (of which Giza 7	4,86 700,000 crs.)
Medium-Long staple cotton— Longer than 1¼" Other varieties	6,000	4,02	6,000	4,27
Medium-staple cotton— Longer than 1⅛". (Ashmuni)	932,000	5,86	1,034,000	6,51
Total ..	4,141,000	4,86	4,389,000	5,15
Scarto			94,000	
Total crop including Scarto..			4,483,000	

This second estimate differs only slightly from the first Government crop estimate published on 5th October, 1944, and corresponds closely with the recent estimate of the Commission de la Bourse de Minet-el-Bassal of 4,500,000 crs. excluding Scarto.

Exports

Exports from the beginning of the season (1-9-44) up to 18th December 1944, are recorded as follows:—

	From 1-9-1944 to 13-12-1944			As compared with last year during the same period (from 1-9-1943 to 15-12-1943)
	Bales		Cantars	Cantars
Sakel	3,381	=	24,483	42,846
Maarad	2,498	=	18,360	30,481
Giza 7	16,326	=	119,996	369,775
Karnak	44,212	=	324,958	371,217
Ashmuni	31,487	=	231,429	454,422
Zagora	3,254	=	23,917	263,923
Various	2,331	=	17,133	80,188
Malaki	....		....	27,103
Sakha 4	....		....	31,321
	103,489		760,276	1,671,276

Exports which proceeded at a very slow rate at the beginning of the season have suddenly improved and now reach 760,276 crs. The recent accelerated offtake has not been without a strengthening influence on the prices of the Alexandria spot market. If exports continue on the present scale, they should, together with the local consumption, easily absorb a quantity of cotton equal to the 1944-45 crop. It is, however, to be expected that exports, which during the first three and a half months of this season amounted only to 45 per cent. of last season's corresponding quantity, will be accelerated.

Planning for India's Needs

The Chemical Industry

THE chemical industry, entering as it does into the manufacture of almost all the materials required for human needs and comfort, plays a leading part in the development, industrial and other, of every nation. India's chemical industry is still in its infancy. It is true that five years of war have helped its expansion to a certain extent. But these favourable conditions will soon end, and then we shall have to face competition as never before. Our survival in that competition depends largely on the steps we take *now* to stabilize and expand this vital industry.

The important factors to consider in this connection are : raw materials, fuel and power, chemical plant, research, labour, transport facilities, and markets. None of these factors can be ignored if production is to be economical ; for the chemical industry has to reckon with several obstacles which are seldom present to the same degree in other industries : use of proportionately large amounts of heat and electrical energy, necessity of large-scale and continuous production, hazards in transportation and production, high ratios of salaries and capital investment to annual value of products, extensive research and control, and rapid changes resulting from scientific and industrial developments.

These requirements of the chemical industry must be carefully considered in the siting of factories, not only with a view to economical production and distribution, but from the standpoint of vulnerability in war.

In the matter of raw materials we are very fortunate. Labour is also available in abundance, though there is an almost unlimited scope for increasing its skill and efficiency. There are large sources of hydro-electric power waiting to be tapped. Coal, somewhat unevenly distributed over the country, is also available in sufficient quantities ; but it is particularly appropriate to stress here that this wasting asset should be most sparingly used for heat and power, and more utilized to obtain the numerous chemical products into which it can be transformed.

A vital consideration is the design of chemical plant. This is the field of the chemical engineer. He must attend not only to the mechanical strength of the materials of construction, but also to the corrosive action of the chemicals, the design and layout of the plant and other related factors.

The fabrication of chemical plant is in itself a highly specialized industry. The manufacture of chemical and allied plant has hitherto been neglected in India. Most engineering firms in this country are concerned mainly with structural engineering. Some do undertake repairs to chemical plant, and recently even the construction of complete units (such as sugar mills, soap plants, etc.) has been attempted. But the major part of the chemical plant required is imported at present. This is an unsatisfactory state of affairs for the building up of a stable chemical industry. Imports are, of course, necessary for purposes of immediate development. At the same time it is essential to make arrangements for the setting up of engineering shops devoted entirely to the manufacture of chemical plant. But to do this we need trained chemical engineers—and this presents us with another grave deficiency.

Instruction in chemical engineering is confined to a painfully small number of institutions here in marked contrast with the U.S.A. and other industrial countries. Not until the chemical engineer can undertake the manufacture of chemical plant in India, will the Indian chemical industry achieve real stability. Here again it is essential to " import " research specialists and other trained personnel until we are in a position to meet our own requirements.

There are numerous directions in which to expand our chemical industry. In the brief space at our disposal we can only list some of these : soda compounds, acids, electro-chemical and electro-metallurgical industries, fertilizers, coal products, silicate industries, oil and related industries, and the carbohydrate industries.

But expansion and progress spring from sound foundations. The requirements of a stable chemical industry are so wide in the matter of raw materials, plant, trained personnel, organization, research, statistics, transport, and markets, that co-ordinated control of the industry is a vital factor in its success. This truth distinctly indicates the desirability of making chemical production and distribution a national rather than a private enterprise. The State possesses powers, resources and facilities which are seldom available to organizations set up for private profit only. But State control, valuable as it is, must be sympathetic to the needs of, and active in its service to, the needs of the industry ; for bureaucratic methods and red tape would not hasten, but hamper, all progress.

Urged on by the pressing needs of war, the chemical industry has permeated and revolutionized the modern world. Our food, our homes, our clothes, and a thousand necessities and conveniences of everyday life depend on this vital industry. A well-established and progressive chemical industry offers a guarantee of national development and self-sufficiency.—*Efficiency News.*

* * *

Cultivation of New Species of Jute

A new scheme to explore fully the economic potentialities of new species of jute plants to be raised from seeds subjected to X-Rays and other radiations of different wave lengths and energies for the purpose of inducing hereditary changes in the seeds, is among the important subjects considered at the winter meeting of the Indian Central Jute Committee. The Director of the Bose Research Institute is the sponsor of this scheme, which is proposed to be worked out in collaboration with the Committee's jute agricultural research laboratories at Dacca.

Indian Mill Finance

Working of Textile Companies

Khandeish Spinning and Weaving Mills Co., Ltd., Jalgaon

(Agents: Indra Singh & Sons Ltd., Bombay)

The working of the company for the year ending 31st March, 1944 shows a net profit of Rs. 19,12,280-8-6, after providing for depreciation, viz., Rs. 74,205-1-0, to which being added the balance of Rs. 15,76,971-9-10 which was subject to taxation brought forward from the previous year, the total comes to Rs. 34,89,252-2-4 from which the provisional income-tax, corporation-tax and excess profits tax for the assessment year 1943-44 amounting to Rs. 8,05,097-6-0 is deducted; there remains a balance of Rs. 26,84,154-12-4 from which the directors have set aside Rs. 26,30,000 to reserve for taxation for the assessment years 1943-44 and 1944-45, leaving a balance of Rs. 54,154-12-4 which they recommend may be dealt with as under:—To pay a dividend at Rs. 60 per whole share and Rs. 15 per quarter share (free of income-tax), Rs. 45,000; and to carry the balance to next year's account Rs. 9,154-12-4.

The company's properties including buildings, machinery, stock and stock-in-trade have been adequately insured.

Coimbatore Pioneer Mills, Ltd., Peelamedu

(Agents: T. R. Narayanaswamy Naidu & Co.)

The working of the company for the year ending 30th June 1944, after providing for commission to the Managing Agents has resulted in a profit of Rs. 30,63,951-5-9. The following expenses have been written off in the profit and loss account: Depreciation on assets on written down value Rs. 64,667-13-3; bonus to staff and operatives Rs. 42,603-11-6 which leaves a net profit of Rs. 29,56,679-13. To this is added the previous year's balance brought forward of Rs. 9,627-10-2 which makes the balance of Rs. 29,66,307-7-2 available for distribution and the Directors recommend that this be appropriated as under: To transfer to reserve account from which the compulsory excess profits tax deposit will be paid Rs. 5,80,000; to provide for income and excess profits tax Rs. 22,86,207-1-0; to payment of dividend at 6½ per cent. to preference shareholders Rs. 6,500; to payment of dividend at 22½ per cent. free of tax on the ordinary shares Rs. 90,000; and to balance to be carried forward to next year Rs. 3,600-6-2.

The profits earned this year are the largest ever since the company commenced its business, in spite of the fact that the working of the company was much interfered with on account of plague and also of the control measures that had come into force during the latter part of the year.

The directors further report that a sum of Rs. 1,00,000 has been transferred from the general reserve account to the taxes reserve account to meet the previous year's excess tax paid over and above the provision made.

Coorla Spinning and Weaving Co., Ltd., Coorla

(Agents: Cowasjee Jehangir & Co., Ltd., Bombay)

The working of the company for the year ended 31st March 1944 shows a gross profit of Rs. 42,36,984-15-2. Last year the company carried forward a sum of Rs. 15,66,693-11-3 out of which a sum of Rs. 13,45,767-13 has been utilised towards the payment of income-tax, super-tax and excess profits tax. The company had also to pay during the year a sum of Rs. 2,26,470 as compulsory excess profits tax deposit, thus converting the carry forward of Rs. 2,20,925-14-3 shown in the balance sheet into a deficit of Rs. 5,544-1-9.

The directors propose to carry to a compulsory excess profits tax deposit reserve fund account a sum of Rs. 2,26,470 being the amount of the compulsory excess profits tax deposit made with Government last year. The deficit of Rs. 5,544-1-9 was met from the profits of the year.

The total gross profit of Rs. 42,36,984-15-2 is appropriated as under:—To dividend on 13,000 shares at the rate of Rs. 15 per share Rs. 1,95,000; to meet last year's deficit Rs. 5,544-1-9; to depreciation of machinery Rs. 27,000; to depreciation of buildings Rs. 20,000; to equalization of dividend fund Rs. 46,000; and to carry forward Rs. 39,43,440-13-5.

The mill buildings and machinery are insured for Rs. 33,23,760 and stores, cotton, stock-in-process and stocks of yarn and cloth have been insured for Rs. 24,92,000. The profits have also been insured for Rs. 18,00,000. In addition the buildings and machinery are insured against war risk for Rs. 21,96,000 and stocks are insured against war risk for Rs. 24,92,000.

Savatram Ramprasad Mills Co., Ltd., Akola

(Agents: Seth Savatram Ramprasad)

The profit and loss account of the company for the year ended 31st July 1944 shows a net profit of Rs. 6,02,790-0-3 which added to the balance of Rs. 1,61,628-2-9 brought forward from last year makes a total of Rs. 7,64,418-2-9.

During the year under review bonus shares of Rs. 3,77,500 at 50 shares of Rs. 5 each for every 106 shares of Rs. 5 each were issued and also an *ad-interim* dividend free of income-tax at 10 per cent. was paid which leaves a balance of Rs. 6,46,638-2-9 for appropriation as under:—Rs. 4,85,000 provision for taxation and Rs. 1,61,638-2-9 to be carried forward.

During this year the mills remained closed for more than four months due to coal shortage and labour trouble which hampered the profits to a great deal.

Model Mills Nagpur, Ltd., Nagpur

(Agents: Bansilal, Abirchand, Dadabhoy & Co., Bombay)

During the year ending 30th June 1944 the company made a net profit of Rs. 68,15,414-10-3. Adding to this the amount of Rs. 13,179-11-5 brought forward from the last year there remains a credit balance of Rs. 68,28,594-5-8. Out of this the directors have already paid on 17th April 1944 an *ad-interim* dividend of Rs. 8 per share absorbing Rs. 2,98,696 leaving a balance of Rs. 65,29,898-5-8, which they propose to appropriate as under:—Provision for all taxation Rs. 48,57,400; provision for compulsory deposit under E.P.T. Ordinance No. XVI of 1943 Rs. 12,76,400; payment of a final dividend at Rs. 9-8 per share free of income-tax Rs. 3,54,701-8;

balance to be carried forward to next year's account Rs. 41,396-13-8.

Considering the fact that during the year under report the mills remained closed for three months on account of labour strikes and coal shortage the directors state that the result of the year's working is satisfactory.

As the mills had made substantial profits the management decided to pay for the year under report also a war bonus under certain conditions to all the employees, who were on the rolls during the year at the rate of one-fourth of their total earnings for the period of 1st July 1943 to 30th June 1944.

The mill and dye-house premises and all other buildings, machinery and stock-in-trade and all other property belonging to the company have been fully insured against fire, war and riot and civil commotion risks. The profit and standing charges have also been insured against fire and civil commotion risks.

Indore Malwa United Mills, Ltd., Indore

(Agents: Govindram Seksaria, Bombay)

The working of the company for the year ended 31st December 1943 shows a profit of Rs. 58,22,086-14-1. This figure of profit is arrived at after paying (*a*) managing agency commission of Rs. 6,85,155-5 at 10 per cent. on profits, (*b*) selling agency commission of Rs. 3,03,591-2-6 at 1½ per cent. on gross sales of cloth and yarn, and office allowance of Rs. 4,277-6-9 from 27-5-1943 to 31-12-1943, (*c*) interest on 1st debentures amounting to Rs. 42,886-13-1 till the end of the year under report and (*d*) after providing Rs. 3,06,425 for Holkar Government housing scheme for the year 1943 and contributing Rs. 4,65,161 towards the Holkar Government scheme for the supply of cheap grains.

After deducting the sum of Rs. 1,395-0-8 being the difference in the interest paid less to the Managing Agents for the year 1942 the balance of profit of last year is reduced to Rs. 46,011-7-4. To this amount is added the sum of Rs. 58,22,086-14-1, making the total of Rs. 58,68,098-5-5. The Directors have set apart for depreciation on buildings, machinery, etc. Rs. 1,13,536-10-7 and for industrial and other taxes provision fund Rs. 20,00,000, leaving a balance of Rs. 37,54 561-10-10. Out of this the directors recommend a dividend of Rs. 111 per share for the year ended 31st December 1943, which will absorb Rs. 22,20,000 leaving a balance of Rs. 15,34,561-10-10 to be carried forward to the next year.

The profits and fixed charges for the current year have been insured for Rs. 10,00,000 against fire and insurance of Rs. 66,000 has been effected against breakdown of engine of both the mills and electric plant of the new mill.

The mill buildings, machinery, Indore and Kannod Ginning Factories together with the stock-in-trade are insured against fire for Rs. 1,80,46,160.

Clothing Supplies in Fifth Year of War

THE year 1943 was the peak year with regard to the supply of tailored items of clothing. India was then the nearest supply base for armies operating in the Middle East and in March 1943, over 12 million items were fabricated.

In the fifth year of war the ordnance clothing factories were called upon to supply just under 7 million items a month. With reductions in demands for clothing and with increased demand for parachutes it was possible to turn over one ordnance clothing factory completely to parachute work. Another factory has been split into two, one for clothing and the other for parachutes. There are thus now 8 ordnance clothing factories fully employed on fabrication of tailored items of clothing and necessaries, employing a labour force of 90,000 excluding the indirect labour employed by tailoring contractors throughout India. Some idea of the combined output of these factories during the period under review can be had from the fact that they accounted for and converted some 215 million yards of textiles, over 5,600 million yards of sewing threads and over 500 million buttons and numerous minor components into 78,941,597 tailored items of clothing and necessaries.

A striking feature of clothing supplies in the fifth year of war was the intensity of change and improvement in patterns, designs and modifications of clothing stores. There was a significant change in the character of the load. Demands for hospital clothing, prisoners of war clothing and clothing for Chinese troops were decreased, but the ordnance clothing factories met the requirements of the United States Forces in India. An increased quantity and variety of items were supplied to the Royal Air Force, Indian Air Force, Royal Indian Navy and the uniformed women's contingents. The battledress for the South East Asia and India Commands was produced in olive green and that for the Middle East in khaki.

The woollen industry which at one time was being entirely used for war production is now meeting civilian demands as well. Thus the value of army blankets has fallen from Rs. 3 crores in the previous year to Rs. 1,38,56,256. Purchases of silk and jute for war purposes continued to be made during the year.

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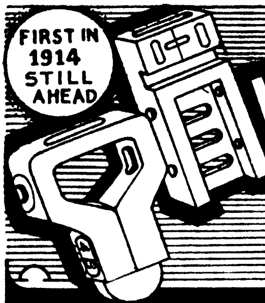

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REVIEWS

Commerce, Bombay : Annual Review Number. Price Rs. 5-0-0.

The latest Annual Review Number of *Commerce* is as usual replete with highly interesting and comprehensive contributions. Among them we may refer specially to those dealing with the role of universities in research planning, the problem of a fair and adequate wage, Indian labour in 1944, employer-employee relations, and industrial development as reflected in import and export trends. As regards mill re-equipment the writer observes that the cotton mill industry must strike a bargain with Government and mill machinery and other manufacturers abroad, in return for co-operation in the war effort, to obtain a guarantee that every facility will be rendered to the indigenous industry to secure its equipment not only during war-time but also after the cessation of hostilities.

The post-war prospects of the cotton mill industry have been dealt with at great length. In the present stage of development a revision of tariffs in favour of imports would appear to be likely, with all that it means in competition with foreign rivals. It is, however, certain that a fully developed internal market will readily absorb the entire production of the Indian industry, which will have to be thoroughly overhauled in the matter of methods and machinery. And it is here that out and out rationalization is advocated. " Groups of competing firms," we are told, " must pool their resources, exchange labour and personnel, develop group buying to advantage, maintain overseas markets, agree to simplify production, concentrate output in the most efficient units, pursue joint purchases and sales and scientific research and so on.... Different sections of the industry will have to organize themselves into " a series of self-sufficiency groups or areas linked together inter-regionally by agreements covering, on the one hand, branches of the industry in which capacity will normally tend to be in excess of demand and, on the other, raw materials, of which the supply is localized. . . Each group could then become a 'vertical cartel,' cut-throat competition regarding prices and qualities will become a thing of the past." The mills have only to join together and set up a central organization on the lines of the Associated Cement Companies and the trick will be done !

The picture is quite attractive, but is it quite so easy as all that ? Is the analogy on all fours ? Is there any comparison between the number of A.C.C.'s constituent units and those in the mill industry ? The A.C.C. was floated when protection was denied to the industry and its prospects were bleak if it did not combine. Are circumstances regarding the cotton mill industry identical or even more or less similar ? The 1930 Bombay attempt at bringing about a mill merger on a comparatively small scale failed owing to " technical and other difficulties." Are these difficulties no less present to-day than in 1930 ? These questions, of course, do not receive an answer in the otherwise able review of the cotton mill industry which we have been discussing.

Social Insurance Planning in India. By A. N. Agarwala, M.A. Published by East End Publishers, E/82, Allenganj, Allahabad. Price Rs. 5-12-0.

At a time like the present when social insurance is so much in the air, the above comprehensive book makes a timely appearance. The actuarial, financial, economic, historical, administrative and other aspects have been discussed in detail. The author has considered the various issues in relation to the special conditions obtaining in India and has succeeded in bringing out a book that should be of great help alike to the economist and the student, the industrialist, the labour welfare officer, as well as to the trade union leader.

NOTICES

Our Sterling Balances. By Bhuvaneswar Swarup Bhatnagar. Published by the Business Bureau, Allahabad University, Allahabad, 1945. Price Re. 0-8-0.

" Our Sterling Balances " is the title of a paper read by Mr. Bhuvaneswar Swarup Bhatnagar before a meeting of the Business Bureau, an association of post-graduate students of commerce of the Allahabad University.

The author first examines briefly the manner in which sterling balances have come into existence and have accumulated. Then he proceeds to indicate their importance and, finally, he surveys and evaluates some of the doubts, misgivings and dangers which have been expressed or have arisen; and, what is important, he suggests ways and means to safeguard and utilize them to the best advantage of the country.

Journal of the Bradford Textile Society (1942-43 and 1943-44). The Society celebrated its golden jubilee in 1943-44 and an account of the celebrations is included in the volume under notice. It contains, as usual, accounts of the various papers read and speeches delivered during the two years 1942-43 and 1943-44; these papers cover a variety of subjects like novelty in the production of fabrics, preparation of warp yarns for the loom, the effect of twist on yarn and cloth, psychology of colour, colour in relation to design, modern systems of drawing and spinning, processing wool fibres, yarns and fabrics, plastics in the textile industry, future of wool textile industry, economics of factory planning and the training of personnel.

The "Indian Home" Magazine. Published and edited by Mohan V. Raj, M.A., B.Sc. (Minn.), for the Indian Home Publications Ltd., at 47, Lakshmi Building, Sir Phirozeshah Mehta Road, Fort, Bombay. Single copy Re. 1 and annual subscription, Rs. 13.

The eighth anniversary number of the *Indian Home* is full of articles such as "Back from the Services," "To Get Things Done," "Films that Educate and Entertain," "India Village," "Servant Problem in India" and other special features that make interesting reading. This magazine is devoted to the entire family, giving current and civic matters for the father, domestic and social information for the mother, and educative entertainment for the child.

The Ahmedabad Millowners' Association: Annual Report for 1943. Price Rs. 10-0-0.

The Report, as usual, gives a list of members, succession list of chairmen and members of the managing committee for 1944-45. This is followed by the speech delivered by the President, Mr. Sakarlal Balabhai, at the latest annual general meeting of the Association and by the text of the Report proper.

Bengal Millowners' Association, Calcutta: Report for the Year 1943 (Abridged). In addition to the report of the Committee of the Association, its statement of accounts and proceedings at the annual general meeting of 1944, the report contains also the presidential address delivered at the quarterly meeting. A valuable feature is the inclusion of a list of members and a list of the cotton mills at work in Bengal as well as a chart illustrative of the progress of cotton mills in India, taken from the Millowners' Association, Bombay.

Safety First Association of India, Electric House, Colaba, Bombay. We learn from the twelfth annual report of the Safety First Association of India that in the field of industrial safety the Association rendered valuable service to factory executives with advice and suggestions. The Association's posters were in great demand and a revised edition of the resuscitation chart in English, Marathi and Hindi was published.

With industry geared to its present high level, the year has been one full of activities for the Bombay Provincial Branch also. The main feature has again been propaganda. The Association's chart on "Resuscitation" was published in Hindi. Many problems have been submitted to the Committee for expert advice, and they have also kept abreast of new developments in industry in this country. The Committee also arranged several demonstrations on first-aid, etc., for the benefit of mill workers, and co-operated with the Labour Welfare Department of the Government of Bombay in arranging safety first stalls in all their exhibitions.

Distribution of Electricity, October 1944. Published by W. T. Henley's Telegraph Works Co., Ltd., Milton Court, Westcott, Dorking, Surrey, England. The firm announces a four-year scholarship tenable at the Gravesend Day Technical School, for competition among the sons of Henley employees. The scholarship will be awarded annually on the results obtained in the Entrance Examination held at the Technical School in March every year, to the son of Henley parents attaining the highest position in this examination.

J. K. Review, Vol. 4, contains interesting articles on the ratio between capital and income, on artificial resources and agricultural experiments, and on India's mineral sources.

CALENDARS AND DIARIES FOR 1945

Commercial Art Engravers, leading block makers of Bombay, have sent us two copies of their excellent wall calendar and a copy of their card calendar for 1945. Sundays and holidays are marked in red and the public holidays are listed on the reverse of the card calendar: an excellent wall calendar in red and blue has also been received from **Tyebally Dawoodbhoy Rangwalla,** Bombay, stockists of J. & N. quality paints and Gourepore linseed oils.

The Hindustan Colour, Chemical and Manufacturing Co., Ltd., Kathwada (Baroda State), have sent us, as usual, an excellent wall calendar for the current year.

The Bombay Yarn Exchange, Ltd., Hanuman Building, Tambakanta, Bombay, have as usual sent us a copy of their card calendar for 1945.

The General Electric Co. (India), Ltd., has as usual sent us their calendar re-fill and reminder sheet.

Messrs. J. S. Holt & Moseley, Ltd. of Manchester, England, have sent us a beautifully printed and illustrated wall-calendar.

Messrs. Volkart Bros., Bombay have sent us a beautiful wall calendar, with two months to a sheet, each sheet bearing a different illustration in colours by Prof. W. Langhammer.

Graton & Knight Co., tanners and leather belting manufacturers, Worcester, Massachusetts, U.S.A., have sent us a fine large wall calendar whose chief attraction is a fine painting in colour of feminine charm.

NEWS OF THE MONTH

Indian

Textile Labour Union for Surat.—A textile labour union on the lines of the Ahmedabad one is to be formed in Surat.

The decision was recently taken at a meeting of textile workers under the Presidency of Mr. Gulab Bhai Desai, President of the City Congress Committee.

New Era Textile Mills Cloth Shop.—A retail cloth shop of the New Era Textile Mills Ltd., has been opened at 5-12, Queen's Road, Bombay, since the 9th instant, where silks and art silks will be available at a price complying with the Hoarding and Profiteering Ordinance and to genuine consumers.

Bombay Working Class Cost of Living Index.—During December, 1944, the working class cost of living index number for Bombay, with the average prices for the year ended June, 1934, equal to 100, was 236. This was six points lower than in the preceding month. The index number for food articles declined by 10 points to 267.

Textile Engineer Wanted for Spun Silk Mills.—Mr. K. Shamsuddin Khan, Manager, Mysore Spun Silk Mills, Ltd., Channapatna, has advertised for the services of a textile or mechanical engineer for work in Spun Silk Mills. Persons with qualifications and previous experience may apply and the salary will be fixed according to qualifications.

Calcutta Office for Nagindas Kilabhai & Co.—Nagindas Kilabhai & Co., importers and suppliers of sizing, chemicals and millstores, of Lalgir Chambers, Tamarind Lane, Fort, Bombay, and Reid Road, Railwaypura, Ahmedabad, have now opened their offices in Calcutta also, the address being Third Floor, No. 10, Canning Street, Calcutta.

Industrial Training in Bombay Province : Decrease in the Number of Students.—There were 3,811 students attending 76 technical and industrial training institutions in Bombay Province in 1942-43, against 4,330 in the previous year. The total grant-in-aid paid to institutions under the control of the Board of Technical and Industrial Training during the year was Rs. 41,108.

Textile Calendar

JANUARY

18th, Thursday :

Institution of Engineers (India), Bombay Centre, Annual General Meeting, Electric House, Bombay.

FEBRUARY

10th, Saturday :

Marwari Chamber of Commerce, Calcutta, Third Quarterly Meeting.

13th, 14th and 15th, Tuesday, Wednesday and Thursday :

Conference of Provincial and State Representatives with Government of India authorities in Bombay to finalize Central Distribution Scheme.

14th, Wednesday :

Africa and Overseas Merchants' Chamber, Bombay, Annual General Meeting.

24th and 25th, Saturday and Sunday :

Fifth All-India Manufacturers' Conference, New Delhi, Sir M. Visvesvaraya presiding.

27th and 28th, Tuesday and Wednesday :

Second All-India Textile Conference, Bombay, inaugurated by Sir Joseph Kay, Kt.

MARCH

1st, Thursday :

Second All-India Textile Conference, Bombay.

14th, Wednesday :

Bombay Chamber of Commerce, Annual General Meeting.

17th, Saturday :

25th Silver Jubilee Annual Conference of the Mechanical Engineers' Association (India) at the B. E. S. T. Conference Hall, Bombay.

High Grade Technological Institute in India : Government's Proposal.—It is understood that the Government of India are appointing a committee to consider the establishment of a high-grade technological institute in India on the lines of the Massachussetts Institute of Technology.

The Committee, which may be presided over by Mr. N. R. Sarker, will consist of men interested in business, applied science and technological education.

Technical Training for Indians: Students to be Sent Abroad.—About 500 students will be sent abroad in autumn this year for a course in technical subjects directly related to various plans for post-war development now under consideration, says a Press Note. These students will be selected by the Central and Provincial Governments, and financial assistance required to enable the students to complete the approved course will be provided.

Cotton Consumption.—Consumption of Indian cotton by the cotton mills in the country during November, 1944, was 359,378 bales as against 362,424 bales in the corresponding month in 1943, states a *communique* from the Indian Central Cotton Committee. It adds that during the first quarter of the current cotton year consumption totalled 1,034,682 bales as compared with 1,068,619 bales for the corresponding quarter of the preceding year.

Cloth Famine Leads to Strange Crimes.—Cloth scarcity recentlly gave rise to a revolting form of crime in Lucknow. Several cases were reported of graves being dug open by thieves with a view to robbing the dead of their shrouds.

One bereaved woman visiting her daughter's grave was shocked at the desecration perpetrated by these cloth thieves. The police have kept a sharp look out for these "grave diggers," and seven suspects have already been arrested.

Increase in Imports and Exports of Goods.—Both the import of foreign merchandise and export of Indian merchandise were higher by Rs. 42 crores and Rs. 16 crores, respectively, in the first half of the current fiscal year, as compared with the corresponding period of last year. The former amounted to Rs. 94 crores as against Rs. 52 crores last year and the latter to Rs. 109 crores as against Rs. 93 crores last year. These figures do not include the value of either imports or exports on defence account.

Extra Cloth and "Atta" Ration for Heavy-weight Film Star.—It is reported that Mr. S. P. Jani, Local Civil Supply Officer of Lahore, has sanctioned eight yards of double width serge to make a single suit length for the film star Durga Mota, whose chest and waist measured 60 and 63 inches respectively, after his recent loss in weight of 80 lbs. due to the introduction of food rationing. The Lahore rationing authorities have promised the starving star additional quotas of *atta* and sugar to help maintain his unique physique.

Interim Dividends Declared by Hyderabad and Mysore Mills.—The ninety-third interim dividend at the rate of Rs. 100 per share, for the year ending 1944, was declared by the Board of Directors of the Hyderabad (Deccan) Spinning and Weaving Co., Ltd., Secunderabad, at their meeting held on 17th January, 1945.

The Directors of The Mysore Spinning and Manufacturing Company, Limited, have determined to pay an interim dividend of Rs. 2 and a bonus of Rs. 4 per share of Rs. 50 for the half-year ended 31st August, 1944.

Ahmedabad Textile Dispute.—The Textile Labour Association has approached the Conciliator appointed by the Government under the Bombay Industrial Disputes Act to start conciliation proceedings in connection with the dispute regarding payment of four months' bonus and compensation for stoppages due to coal shortage. As regards the payment of bonus, the Labour Association states that it would roughly amount to Rs. 1,80,00,000 and that it is very easy for the industry to satisfy this demand from a gross profit of about Rs. 18,00,00,000.

The Mechanical Engineers' Association (India): 25th Silver Jubilee Annual Conference.—The Twenty-fifth Silver Jubilee Annual Conference of the Mechanical Engineers' Association (India) will be held on 17th March 1945 at the B.E.S.T. Co., Ltd., Conference Hall, Bombay, and Mr. G. F. S. Collins, C.S.I., C.I.E., O.B.E., I.C.S., Adviser to the Governor of Bombay, will inaugurate the function. The Association is an all-India body and on this occasion it has made an appeal for funds to the industrialists and the general public to enable it to establish itself on a firm foundation and to be more useful in the future industrialization of India. In this connection, it is also proposed to hold an exhibition under the guidance of influential business men on 15th March 1945.

Concession to Mulberry Growers in Kollegal.—In view of the importance of the sericulture industry, the Madras Government issued orders in December 1943 for the permanent assignment of 10,000 acres of compact blocks of assessed and unassessed waste lands in Kollegal Taluk, Coimbatore District, on condition that the ryots to whom a permanent assignment had been made grew only mulberry on these lands. The Government have now directed that the condition that mulberry only should be cultivated be relaxed in favour of the "landless poor," that is, those ryots who are unable to take up more than four acres for cultivation. These "landless poor" will be permitted to grow food crops to an extent not exceeding one acre out of the area assigned in each case for planting mulberry.

Indian Industrial Delegation to Australia.—A group of Indian industrialists is now visiting Australia to explore the possibilities of closer commercial and industrial relations between the two countries, particularly during the post-war period.

The delegation consists of Sir Datar Singh, Punjab; Mr. Neville Wadia, Bombay; Mr. Abdul Wahid Dawood, Calcutta; Mr. Ram Rattan Gupta, Cawnpore; Mr. Visvanath, Mysore; Mr. Shanti Prasad Jain and Mr. Michael Brown (Secretary).

The party are the guests of the Commonwealth of Australia and they will make an extensive tour of industrial centres, many of which have developed very considerably since the outbreak of war.

At present India supplies most of the cotton textiles used in Australia, while very large quantities of Australian wool and wheat are being sent to India.

Madras Government's Grant to Annamalai University.—The Government of Madras, it is understood, have sanctioned Rs. 10 lakhs, non-recurring grant, and Rs. 2 lakhs recurring expenditure to the Annamalai University for the starting of a School of Technology. The University has chosen a site and initiated acquisition proceedings in respect of other buildings in the vicinity, immediately essential for the purpose.

The School of Technology will include Physical Science Laboratory, Chemical Science Laboratory, Electrical Science Laboratory which will also include a Mechanical Engineering Workshop, a Hydraulic Laboratory and a Strength-of-Materials Laboratory.

It is also understood that an Advisory Committee has been constituted, consisting of experts in the line. The School of Technology will function from July, 1945.

Manufacture of Rayon and Plastics in India.—Speaking on the subject "Building a New India" in the A.I.R. broadcast from Delhi on 10th January 1945, Mr. J. B. Vesugar, Industrial Adviser to the Government of India, stated that notwithstanding large forests in various parts of the country, India is short of the finer variety of woods. It will take many decades to make up the deficiency even if it were feasible. We should, therefore, concentrate on building up a plywood industry.

Practically all the resources are available for manufacturing rayon and plastics. As for artificial silk, it will for some years be necessary to import pulp—as Japan has always done—but with experience of the industry and intensive research, it should be possible to develop indigenous sources of cellulose. The establishment of coal distillation, alcohol and chemical industries will make many products available for various synthetic industries.

Area Under Cotton: Official Forecast.—The area under Indian cotton during the 1944-45 season is estimated at 12,957,000 acres, representing a decrease of 23 per cent. compared to the revised estimate on the corresponding date last year, states the second official crop forecast issued by the Department of Commercial Intelligence and Statistics, Calcutta, a few days ago.

The forecast is based upon reports which generally relate to sowings made up to 1st October last. On the average of the last ten years, the area reported in the second forecast has been 83.4 per cent. of the total area reported in the final (April) forecast.

The following are the present estimates of area, classified according to the recognized trade descriptions of cotton:—

Bengals 1,661,000 acres, Americans 3,363,000 acres, Oomras 3,631,000 acres, Broach 430,000 acres, Surti 307,000 acres, Dholleras 759,000 acres. Others 2,806,000 acres, total 12,957,000 acres.

Cawnpore Mill Directors Fined on False Coal Returns Charge.—Fines aggregating Rs. 41,500 were imposed by the District and Sessions Judge, Cawnpore, on 31st January 1945 on some directors of the J. K. Cotton Spinning and Weaving Mills, and their employees in two coal cases under Defence of India Rules 116, 117 and 122. The coal was ordered to be confiscated.

Trial Cotton Cultivation in Aramboly Dry Crop Farm.—The Travancore Agricultural Department initiated trial cultivation of cotton in the Aramboly Dry Crop Farm, and encouraged by the results obtained, the Department decided last year to bring 100 acres of land in the Mahindragiri Fuel Reserve under cotton cultivation. The area was leased out to a local ryot and the cultivation started early this year under the control and guidance of the department. The results obtained have been very satisfactory. The cotton harvested was supplied to local spinners. It is estimated that some 20,000 acres, stretching from Aramboly to Cape Comorin, can be brought under cotton as the soil and climatic conditions are favourable for the cultivation of this crop.

Industrial Stoppages in British India : Decline in Number of Man-days Lost.—One hundred and fifty-nine industrial stoppages, involving 163,126 workers and resulting in the loss of 1,180,877 man-days, occurred in British India during the first quarter of 1944. In the same quarter of the previous year there were 311 stoppages involving 286,515 workers and resulting in the loss of 1,354,263 man-days.

There were eight stoppages involving 5,000 or more but less than 10,000 workers and one involving 10,000 workers or more. In two stoppages 100,000 or more man-days were lost; in one of them the number of workers involved was less than 5,000.

Textile (cotton, silk, woollen and jute) mills accounted for 31 per cent. of the unmber of stoppages, 56 per cent. of the workers involved and 80 per cent. of the man-days lost. In 100 stoppages or 63 per cent. the demands related mainly to wages or bonus.

The number of stoppages in which the workers were wholly or partially successful was 53 or 36 per cent. of the total number of stoppages which ended during the quarter and in 89 cases or 60 per cent., the workers were wholly unsuccessful.

Foreign

Arundel Coulthard & Co., Ltd., Declare Dividend.—The Directors of Arundel Coulthard & Co., Ltd., well-known textile machinists of Stockport, England, announce a net profit of £12,430 on the twelve months against £16,352 a year ago. The dividend is again 4 per cent., less tax. It is proposed to convert the shares into stock.

Cotton Shortage in China.—To relieve shortage of fine cotton, the Chinese Ministry of Finance will organize the Yunnan Cotton Corporation in collaboration with the Yunnan Provincial Government and those interested in the cotton industry, it is learned in Chungking. Plans are being studied and a Cotton Yarn and Cloth Control Committee will be organized to proceed with preliminary work.

Textile Machinery Exports from Great Britain.—Textile machinery is still being exported although Lancashire millowners have difficulty in getting spare parts. Board of Trade returns show that last year 13,010 tons were exported compared with 70,776 tons in 1938, the value being £4,695,379 against £8,407,354 respectively. British India was the biggest importer with a total of 7,887 tons while the United States took 743 tons, Australia 760 tons, Canada 313, and other British countries 991 tons. The remainder went to neutral countries.

Textile Refresher Course for Ex-Service Men.—The Department of Textile Industries of the University of Leeds, England, according to Professor J. B. Speakman, its head, has received numerous letters from men in the forces inquiring what steps have been taken to help them to renew their acquaintance with the wool textile industry when demobilization begins. Their anxiety has arisen largely because so many new textile fibres have been developed and brought into service in conjunction with wool during the war, says the *Manchester Guardian*. The department, accordingly, has devised a three months' refresher course for service men who have had previous training in textile technology.

Textile Trade Representative in Overseas Trade Development Council.—Out of sixteen appointments made by the Department of Overseas Trade in Britain to the Overseas Trade Development Council, which has been reformed and is to meet regularly to study methods of export trade promotion and the nature and extent of Government support, the textile trade has only one representative, Mr. Angus D. Campbell, a Director of Forbes Campbell & Co. and G. & R. Dewhurst Ltd., merchants and shippers. He is a past President of the Manchester Chamber of Commerce of which he is now a Director, and has been on textile missions to India on three or four occasions.

1944 Edgar Marburg Lecture on Textile Fibres.—A most interesting Marburg Lecture was presented at the annual meeting of the American Society for Testing Materials at Pittsburg, Pa., U.S.A., by Dr. Harold DeWitt Smith on the subject "Textile Fibres—An Engineering Approach." Dr. Smith devoted much time to preparing material that would be of interest not only to textile technologists, but especially to the large and diversified group of consumers of all kinds of textiles. He has stressed the importance of a study of mechanical properties of textile fibres in relation to the desired properties in yarns.

British Help for Continental Textile Industries.—Sir Frank Platt, Cotton Controller, has returned to England after leading a British Textile Mission on a tour of textile centres in France and Belgium. The object of the visit was to ascertain what help is required to enable the textile mills of those countries to start up again and particularly to find out to what extent they can be used to produce yarn and cloth required by the Forces. Many French and Belgian mills were undamaged and if the machinery can be put in good order and suitable labour obtained it is thought that supplies of raw cotton could be sent to enable cotton yarn and cloth to be turned out. The matter is now being considered by the Ministries of Supply and Production in the light of the Platt Mission's report.

Proposal to Start Textile Mills in Angola and Mozambique.—According to a report from Lisbon in the current fortnightly review of the Bank of London and South America, the Portuguese Government has published a decree authorizing the formation of a society to establish a cotton textile plant in Angola and another in Mozambique, with an initial capital of 100,000,000 escudos (about £1,000,000). An installation commission has been appointed, comprising representatives of firms and individual traders in the Portuguese textile industry, all of whom have the option of subscribing to the capital of the new venture, the proportion of their shares to be based on their output capacity. It is estimated that the total funds required to complete the project will amount to some 250,000,000 escudos.

Textile Institute Awards Research Studentship.—In May, 1943, the Textile Institute, Manchester, announced inauguration of a scheme for the award of Research Studentships. The first award has now been made to Mr. R. L. Kitchen, A.T.I., of Huddersfield. In accordance with the scheme, facilities for research are being provided by the University of Leeds. Mr. Kitchen is undertaking investigations on "The Action of Hypochlorites and Related Compounds on Proteins, with Special Reference to their use in Rendering Wool Unshrinkable."

The proposals for the provision of facilities in connection with the research studentships came, in the first instance, from the University of Leeds. The Institute states that proposals from other educational bodies on similar lines would receive equal and sympathetic consideration.

Demand for British Textile Machinery in Post-war Period.—The output of British textile machinery in the post-war years will probably be the highest ever, states the *Financial News;* £70,000,000 is the estimated value of the orders which the home cotton industry alone will place during the first five years after the end of hostilities. In addition the British wool textile industry contemplates a big renewal of plants and is negotiating with machine manufacturers and the Board of Trade with this aim in view. The silk and rayon industries will also swell the volume of orders and an additional demand will come from hosiery, hemp, jute, knitting and carpet trades. Exports are also expected to expand. Large overseas contracts are already in sight and the post-war years, says the paper, should furnish better returns than 1937 when the United Kingdom exports of textile machinery exceeded £8,000,000 in value. The President of the Board of Trade, Mr. Dalton, has already arranged an increased allocation of iron and steel for textile machinery makers and production will expand progressively as manufacturers are released from war contracts.

Modernization Plan for Canadian Textile Mills.—Textile mills in Canada are anxious to begin their extensive plant modernization programmes, which have been planned for many months. Continuous night and day operations throughout the war period and lack of new machinery during the last two years have greatly increased wear and tear and obsolescence. The industry is converting plant for large-scale production of civilian goods, although the supply position is acute on certain lines. During the ten years from 1930 to 1939 inclusive, Canada's mills spent $3,500,000 annually on imported special machinery, mainly from the United States and Britain, with the former supplying the bulk of requirements. The value of machinery imports from the United States averaged $2,600,000 annually, while the average annual value of machinery imported from Britain totalled around $700,000. Small quantities of machinery were imported from Germany, France, Switzerland, and Italy.

Mills in Canada are most anxious to obtain British cotton spinning and woollen and worsted machinery, as they do not wish to rely on the United States as the sole source of supply. Consequently any measures evolved by the British Government to expedite the manufacture of textile machinery for Canada will be welcomed.

A.S.T.M. Receives Ordnance Distinguished Service Award.—At a special meeting of the American Society for Testing Materials in Philadelphia on 12th October Major-General G. M. Barnes, Chief, Technical Division, Army Ordnance Department, presented to the Society the Ordnance Distinguished Service Award, this having been authorized some weeks earlier. President P. H. Bates, National Bureau of Standards, received the award for the members.

In tendering the award, which was made " In recognition of outstanding and meritorious engineering advisory services, in war and peace, for the development, manufacture and maintenance of Ordnance material," General Barnes stressed the great uniformity, reliability and quality which ordnance material must have, the quality being insured by proper and adequate specifications.

In accepting the award, President Bates referred to the extensive A.S.T.M. wartime work resulting in emergency standards and provisions, the widespread use of the Society's specifications, and cited a number of projects which were connected with activities of the armed services.

In referring to General Barnes' suggestion that the Ordnance Department, A.S.T.M. activities continue in peacetime, he stated that A.S.T.M. would most certainly co-operate.

Fifty Years Ago

(From the *Indian Textile Journal*, February 1895).

Adulterated Lubricating Oil

" It has come recently to our knowledge that a brisk business is being done in adulterated mineral lubricating oil in Bombay to the prejudice of honest dealers . . . the slovenly manner of buying stores for mills which exact no guarantee of quality makes it easy for anyone who can lie picturesquely to mix kerosene with spindle—or shafting-oil and sell it at an alarming sacrifice. It is only in India that such a barefaced swindle would be possible. Thinning mineral spindle oil will very soon result in the rapid wear of spindles and the saving in first cost of oil will soon be swallowed up twenty times in repair of machinery. We wonder how many of our local oil contractors would survive a really strict supervision of their deliveries."

The Indian Textile Journal

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Founded by **SORABJI M. RUTNAGUR**

55 th Year

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EDITORIAL

Distribution

IN January last we referred to a new scheme of distribution which was expected to put an end to black markets and to assure to each province its predetermined quota. Under it mills and quota-holders in Bombay were each divided into 14 groups. Each group of quota-holders received goods from its respective mill-group, each quota-holders' group containing about six leading men selected by themselves to arrange the details. Further, members were selected, one from each quota-holders' group, to form a committee of 14 with whom the up-country buyer's requirements were negotiated. This committee of 14 sent particulars of its requirements on prescribed forms to the Provincial Textile Controller. After scrutiny, permits were passed to a cloth distribution panel of ten members, who then returned the permits with their authorization to the committee of 14, and the latter undertook to deliver the goods to the parties concerned. The cloth distribution panel advised the Textile Commissioner regarding the arrangements necessary to secure the proper distribution of the cloth manufactured and bought in Bombay to destinations outside the Bombay surplus area. No cloth bales could be despatched outside Bombay without a permit issued by the Textile Commissioner through the cloth distribution panel.

While the foregoing arrangement must be said to have worked smoothly in Bombay, the cry of shortage and black marketing in the up-country centres began to swell in volume and it was realized that the system obtaining in Bombay should be extended to the other centres also and that the different provinces and States should be enabled to work under more or less equal conditions. Accordingly, groups of quota-holders have been formed in manufacturing centres to despatch goods to the deficit zones under the supervision and control of the trade associations and Government representatives. Provincial Governments have been asked to select, in consultation with the dealers' associations, certain dealers who were in the trade in the basic period 1940-41-42 and to authorize them to purchase goods from the manufacturing centres. Quota-holders or " A " dealers, wholesalers or " B " dealers and retailers or " C " dealers were the three classes into which the trade was classified. A quota-holder can sell cloth only to a " B " dealer or dealer nominated by the deficit zone to purchase cloth on its behalf; a " B " dealer can purchase cloth only from an " A " dealer and must sell only to the " C " dealer or retailer; a " C " dealer or retailer can purchase cloth only from a " B " dealer and he can sell only to the consumer in retail. At the same time the provincial Governments are reported to have been asked to revise their licensing systems with a view to reducing the number of licences as much as possible.

The Government of Bombay have, therefore, set about in right earnest to tackle the distribution end of the trade. Under the Bombay Cloth Trade Regulation Order 1945, which came into force in Bombay and Ahmedabad on 1st of March 1945, no buying or selling of cotton piecegoods in the trade will be possible except in terms of a licence. Dealers have been divided into six different classes, viz., quota-holders, wholesalers, retailers, commission agents, hawkers and others, and different licences and forms, and different licence fees and other regulations governing the issue and renewal of licences, as well as penalty clauses for infringement of the order, have been laid down. There are also regulations regarding the display of price lists, the issue of cash memoranda and the submission of quarterly stock returns. The licensing authority, who is the Provincial Textile Controller in Bombay, is empowered to direct a dealer to supply at specified rates to specified parties and within specified periods and to issue special or general directions regarding the storage, sale and transport of cloth. He can also call for information, inspect accounts and stocks, and enter and search any premises. With more or less similar arrangements made in Ahmedabad also, it is to be hoped that we will hear less of black markets in the cloth trade.

Textile Men Confer

FOR the second time in the history of the Indian cotton mill industry, the mill managers, weaving masters, spinning masters and other technical staff as well as the mill engineers and labour officers have met and dispersed. The first All-India Textile Conference, which met in Bombay last March, was inaugurated by Sir Victor Sassoon, Bart. The second conference, which met also in Bombay on the 27th and 28th February and 1st March 1945, was inaugurated by Sir Joseph Kay, Kt. India is the second largest cotton textile manufacturing and exporting country in the world, America standing first. Its importance in the world cotton textile economy, which the war has underlined, will continue to grow in the immediate post-war years of acute world textile shortage, and the technical staff employed in the Indian cotton mills have come together, therefore, not a day too soon. Until last year they lacked a common platform for the expression of their views on the machinery and processes of production as well as on their own conditions of work and employment. They had no representative organization for the mutual interchange of opinions and experiences and for the establishment of social contacts among themselves. Now this gap has been more than filled by the Textile Association (India) and the annual conferences conducted by it in collaboration with the Victoria Jubilee Technical Institute, the pioneer technological institution in the country. The second conference which met last month had the usual quota of discussions and papers, an exceptionally fine exhibition of textile accessories, processes and fabrics, and programmes of drama, dance and music, while the whole show was rounded off with the customary instructional visits to mills and laboratories for the up-country members and visitors.

In the course of his inaugural address Sir Joseph Kay dwelt on the present and future prospects of the Indian cotton mill industry, its post-war rehabilitation and re-equipment problems, the implications of the Platt Report, the necessity for more provision for technical training and research, reorientation of the labour movement, and the future of official control. He was hopeful that in the absence of competition and price-cutting from without, Indian mill and handloom production should be able to sell at remunerative rates and satisfy the entire internal requirements; if production is stepped up more and more export markets should also come within their reach. It is here appropriate to draw the reader's attention to Sir Joseph's remarks on the unsatisfactory packing of Indian piecegoods. This has been a matter of constant complaints from India's oversea customers, specially East Africa and Australia, and the Indian Trade Commissioners in Mombasa and Sydney have time and again emphasized the need for more careful packing and labelling of cases.

Sir Joseph's optimism about the future of the industry was tempered, however, with caution, when he referred to the introduction of new fabrics, possible changes in fashion, labour legislation and security schemes and the possibility of Government control outliving the emergency that brought it into being. Increased demand for textiles and inflationary causes having contributed to high prices and black markets in textiles, there can be no conceivable reason for the continuation of rigorous control once conditions return to normal. This reminder from Sir Joseph has come at a time when the air is thick with proposals for the nationalization or State-ownership of industries. During his budget speech, Sir Jeremy Raisman, Finance Member, hinted at the prospect of State-owned industries as a means of additional revenue. Even when considered from the purely academic point of view, equally strong arguments have always been forthcoming as much for the system of private enterprise and ownership as for the system of State control and ownership. While it may be considered that the advantages accruing from State ownership far outweigh other considerations when transport, irrigation and power industries are concerned, the same cannot be said with any degree of plausibility about consumption goods industries like cotton textiles. Dealing with machinery replacements and renewals, Sir Joseph Kay emphasized the responsibility of the technical staff for formulating their plans always in the light of what they expect to earn from the capital outlay.

Cotton Textile Industry in India and the United Kingdom

Post-war Improvements and Policy

By T. MALONEY, M.C., A.M.C.T.

(*Specially Contributed*)

THE public pronouncements of the Chairman of the British Cotton Board, Sir Raymond Streat, are almost invariably interesting and illuminating. His address to the Oldham Textile Society of the 26th January was no exception. He was speaking on the aims of post-war policy and, in the course of his speech, named six essentials which he thought desirable for creating the necessary conditions for the resuscitation of the Lancashire industry. Some of these might also be borne in mind by manufacturers in India whose many post-war problems will resemble those of Lancashire.

The six essentials are:—

(1) "To get the right outlook in the industry all sections must be in it for more than a livelihood."

What Sir Raymond was apparently thinking was that millowners must not treat the unions which they control merely as instruments of private profit, but as integral parts of a national economic asset. This, to my mind, implies that the organization and the future character and development of the industry should be on a planned, co-ordinated, scientific and efficient basis. Before leaving India, nearly two years ago, I made a similar plea for co-ordinated action in the planning field and should, at this juncture, like to repeat the need for it.

(2) "Strengthening of the organizational structure. The world of to-morrow will make short work of the brilliant but entirely selfish man, or firm, who insists on going his own way completely regardless of anything outside his ken or beyond his immediate interest."

It can hardly be denied that in many directions the organizational structure of the Lancashire industry requires strengthening. This must be so in the case of a pioneer industry which has been gradually built up, over a very long period of years, by the initiative, skill, and spirit of adventure of practical spinners, weavers, finishers, and individual firms of merchant distributors. There has so far been comparatively little co-ordinated planning by the industry as an entity and the sectionalization of the industry into what have become almost separate trades, with inadequate connecting links, will undoubtedly add to difficulties of Government and of those who control the industry in their task of rationalization. What to me seems most urgently needed is an increase in the number of vertical combinations whose activities would cover every process of manufacture incidental to the production of the completely finished materials in which they specialize. Failing vertical combinations, considerable improvements could probably be effected by a growth in the number of horizontal combinations in which, for example, the particular equipment of a spinner could be canalized for the production of yarns of the counts and qualities, and in the form required, by a weaving concern or a group of weaving concerns making standardized and specialized cloths. Allied to, or working in close co-operation with, such a combination, there might and, generally speaking, should be a finishing and, where needed, a printing plant. The whole should then be linked to an adequate merchanting organization. It can, of course, be argued that actual amalgamation of the various manufacturing units essential for the production of particular types of specialized fabrics would tend to destroy the inventiveness and initiative of the spinning, weaving, finishing and merchanting firms making up the co-ordinated enterprise. This might be so, but in certain cases the advantages and savings to be secured by co-ordination or amalgamation might be greater than the disadvantages restricting the initiative of the individual firms making up the joint enterprise. In this connection it must not be forgotten that it is the skill and enterprise of the various sections of the trade as now constituted which has gained for

Lancashire its world-wide reputation as a producer of quality goods. Hitherto, Lancashire mill men have been intensely individualists, but hard facts, the experience of control during the war years, and the depression immediately preceding the war, have demonstrated the value of joint action and policy over a wide sphere and while, in my view, it would be wise to leave very ample scope for the development of private enterprise and individual initiative in the various sections of the industry, Government and the controlling organizations of the trade could with advantage encourage and assist co-ordination of production and amalgamations amongst spinners, weavers, finishers and merchanting houses in the many cases where co-ordination or amalgamation would demonstrably assist the modernization and efficiency of the comprehensive entity.

(3) " A thoroughgoing reform of the labour arrangements. They must act with faith in each other and in the future of the industry. Only so can they succeed."

Volumes might be written on this aspect of the problem but this is hardly the place or the time. What is certain is that without effective assistance from the workers and their organizations, and a complete re-orientation of their attitudes to shift-working, simplified methods of remuneration, rationalization, etc., the achievement of substantial results in the direction of reduction of costs of manufacture will be impossible. As with Lancashire, so with India. Labour and capital are both vitally interested in making any industry a truly great economic asset to the country and the old policy of antagonism and unilateral action must be substituted by policies of co-operation and consultation when important questions of internal economy arise.

(4) " The development of new relationships between production and distribution. What he wished to see was a great extension of the methods of close tie-ups between producer firms and distributor firms."

With all due deference to Sir Raymond, I would say that he was being very kind to the distributors, many of whose present activities should logically devolve on the producers. With spinning, weaving, printing and finishing generally carried on as though they were separate industries instead of integral parts of the general process of cloth manufacture, and with a multiplicity of very small units operating in the weaving and finishing trades, the way has been left open for the creation of a host of unnecessary and expensive intermediaries who will probably continue to exist until the wisdom of co-ordinated activity or voluntary amalgamation of suitable units has become more fully appreciated.

Tax Relief for Cotton Industry

(5) " The Government must act courageously on the doctrine that the re-equipment and modernization of industry, which they so much desire, can only be forthcoming in practice from profits. New capital will not appear unless it can see some prospects of being rewarded out of profits."

Sir Raymond went on to say that Lancashire firms are ready and willing, indeed anxious to re-equip and modernize, but the proposition is just unworkable unless modifications in taxation policy and price control are introduced. The Government must decide if re-equipment and modernization are in the national interest and act accordingly.

There are, in my view, indications that the British Government does realize some of its obligations in this regard and it seems possible that, in the near future, industry generally may receive legislative reassurance in the matter of the promised 20 per cent. refund of E.P.T. for post-war rehabilitation of plant, and that a concession will be made in respect of income-tax liability from profits expended on re-equipment. Concessions such as I have just indicated go only part of the way and something much more generous, helpful and permanent in the matter of reduction of profits taxation will be necessary to achieve effective results in the task of modernizing the Lancashire industry. India is perhaps better placed than Lancashire in this matter of profits taxation, but it would be at least pertinent to inquire whether any definite reassurances have, as yet, been elicited from the Government of India on the very vital issues of the general level of profits taxation, the refund of payments by industry to what I might call the special "rehabilitation" fund, and depreciation allowances after the cessation of hostilities.*

What I should like to see in addition to a fairer basis of profits taxation, by which I mean a permanently lower basis of taxation and a more generous scale of depreciation allowances, would be the delegation of authority to a representative but small committee of the industry to approve and sanction expenditure by individual firms on schemes of plant renewal or modernization to the full extent of the amounts paid by them into the "rehabilitation fund," supplemented where necessary from other reserves or even new capital. I mention new capital for the reason that there is little doubt that for many years to come machinery, raw materials, labour and all overheads will cost considerably more than in pre-war years. The result will be that what constituted adequate provision for paid-up and working capital in the past will no longer be adequate in the future. It must also be remembered that even where a company or firm has fully depreciated its existing plant the funds available by reason of such depreciation would by no means cover the cost of the replacement machinery required and that adequate additional funds out of profits do not exist because they have been swallowed up in E.P.T. payments.

[*We have since received the following further note on this topic from Mr. Maloney.*—ED.]

The Chancellor of the Exchequer in England has recently introduced an Income Tax Amending Bill designed to assist the modernization and re-equipment of buildings, plant and machinery. The major concessions incorporated in the Bill as far as industrialists are concerned are, firstly, the initial allowance of 10 per cent. of the cost of new buildings and the annual depreciation allowance of 2 per cent., and, secondly, the initial allowance of 20 per cent. of the cost of new plant and machinery and an increase in the annual allowance.

As stated in the London *Times*, "the new arrangements for taxation of machinery do not really represent a net saving to industry since the outstanding balance of cost has always been chargeable to obsolescence allowance at the time of scrapping or replacing, but in cases where savings from retained profits are available industry will receive a substantial immediate gain by receiving the allowance at the beginning of the life of the machinery instead of at the end and thus be assisted to shoulder the burden of financing new plant at the end of the war." The *Times*, however, points out that even where liquid reserves are available they will be related to 1939 machinery price levels and not to the greatly enhanced machinery prices of to-day.

The new allowances in respect of buildings are a clearer gain because obsolescence allowances have not been generally obtainable in respect of buildings and as such they are very welcome.

The assistance which the Lancashire mill industry will derive from the new income-tax reliefs will in my view have practically no effect on the industry's capacity to achieve rapid post-war re-equipment. What is really needed is a reduction in the rate of E.P.T. which, if not realized soon, will mean that the bulk of immediate future profits which can be expected, taking into consideration the war position, will go into Government coffers. All that the mills can count on just now towards re-equipment is the depreciation which they have been able to set aside during the war years and the 10 per cent. refund they may expect to obtain at some future date from the rehabilitation fund. This money will be totally inadequate to meet the cost of anything like complete re-equipment with machinery prices likely to remain at something like twice the immediate pre-war levels.

Still one must recognize that some concessions in taxation have been achieved and if there were a guarantee that E.P.T. would be reduced or removed when the war with Germany ends, then Lancashire could look forward more hopefully.

The Chairman of the Cotton Board recently addressed the Liverpool Economic and Statistical Society on the subject of cotton trade needs. The lecture was to my mind somewhat academic in character but it was important inasmuch as it hinted that re-equipment and modernization of the industry would be achieved by the individual action of separate units. The *Manchester Guardian* report referring to Sir Raymond's speech says:—" The total situation," he said, " will never be in the grip of those concerned with any one part of it. That means that nothing the growers can do with their commodity can substantially affect the development of synthetic fibres. It means that capital investment on re-equipment designed to increase production per man-hour has to be considered not merely on a calculation of the consequences upon costs and prices but equally upon such factors as the nature and degree of protective devices likely to be encountered in export markets. It means that plant developments have to be considered not merely in regard to their desirability for the production of the same goods but with an eye on the possibility that the goods themselves may be out-moded by technical and scientific developments."

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*Please see page 36? for the tax concessions announced by the Finance Member of the Government of India in his latest budget speech.

From all these important considerations he deduced that there was no single policy such as might be adopted by a nationalized industry which could safely be embraced. We should do best to rely upon the variegated reactions of different units in system of free enterprise. The trade catered for an infinite variety of needs and markets and the pressures would manifest themselves in each of its many sections. The nation would be best served, therefore, by a system which resulted in flexibility and an unlimited power of adjustment by separate units.

(6) " Access to markets."

Here, touching on a very tender spot, Sir Raymond stated that Lancashire had no satisfactory indication from the Government as to what it intended after the war concerning commercial agreements with countries overseas and that " some of them " had a worrying fear that this silence was ominous and that trade may be sacrificed to politics. He went on to say that Lancashire must not expect commercial agreements to enable her to sell goods at prices other than those obtainable by the best competitive efficiency, but that, on the other hand, the Government could not expect Lancashire men to sink their money in developing efficiency until they could see at least a fair chance of trading at a profit. India, as the greatest pre-war market for cotton textiles, will definitely be interested in the type of commercial agreement Lancashire wishes to secure, but can hardly object to Lancashire's obtaining a square deal. With Japan out of the way as a source of supply of " bread-and-butter " lines at " crust-and-margarine " prices, there should be room for a substantial volume of cloth imports from Lancashire in special lines, without in any way hindering India from healthily developing her already extensive capacity to manufacture practically all of India's requirements of " essential " cotton goods. Sir Raymond declared, " excepting only Japan with its lower standard of living, it was still a fact that no other producing country could face Lancashire's competition without the protection of stiff tariffs," but in making such a statement he was perhaps rather carried away by his theme, or possibly he was thinking of special lines, for I really doubt whether in ordinary qualities Lancashire has any advantage in production costs over countries like Russia, China, Czecho-Slovakia, Poland and Italy. Naturally, during the next few years, with markets denuded of cotton goods owing to the war, Lancashire's export trade, and India's also, is likely to be extensive, but with prices controlled and profits taxed as they are to-day, little money will remain with manufacturers for modernizing and re-equipment. Such ephemeral prosperity as the immediate heavy post-war demand for cotton goods might create, either in Lancashire or India, would be worse than useless in the long run. No wonder, therefore, that the more far-seeing Lancashire millowners are seeking for assurances in the matter of access to markets on reasonable terms, and for considerable reductions in taxation.

After all is said and done, the Lancashire cotton industry's main hope of permanent future prosperity will largely depend on the extent to which its organization is improved and its plant modernized and renewed, but given an easement of taxation burdens re-equipment and machinery renewal will proceed apace.

Verb. sap. In these matters of organizational improvement and plant renewal, India also cannot afford to be left behind.

Tax Relief for Indian Industry ?

Special Allowances Announced for New Machinery and Industrial Research

Sir Jeremy Raisman's Last Budget

THE following extracts from the Budget speech of the Hon'ble Sir Jeremy Raisman, Finance Member, Government of India, at the latest session of the Central Legislative Assembly will be read with interest as indicating the extent to which Government are willing to afford tax relief to industry for purposes of re-equipment and rehabilitation, as contrasted with the demands that were being repeatedly made by millowners and industrialists in the country.

" In the sphere of direct taxation, it is proposed to continue the excess profits tax at the present rate, together with the scheme of compulsory deposits, for a further year up to the 31st of March, 1946. As regards income-tax, we have given considerable thought to the problems which will shortly arise in regard to the financing of the re-equipment of industry. Our scheme of war-time taxation has throughout been so devised as not to deplete, and on the contrary to strengthen the reserves at the disposal of industry for meeting the calls which will be made upon them in the post-war period. In this respect, we may, without undue sacrifice of modesty, claim to have shown more foresight than we have been given credit for.

" Nevertheless, we are conscious that the restoration and expansion of the machinery of production will call for some new form of assistance, and we feel that we are justified in adapting to Indian conditions the measure of relief which has been announced in the United Kingdom. **This will take the form of the grant of special initial depreciation allowances in respect of new buildings erected, and new plant and machinery installed, after the 31st of March, 1945. These allowances will, in the year in which they are given, be an addition to the usual depreciation allowances, and they will not be deductable in arriving at the written down value. They will not be given for E.P.T. purposes.**

" It is proposed to prescribe these allowances by rule, but I may state here that the figures I have in mind are 20 per cent. on plant and machinery and 10 per cent. on buildings. Allowances at these rates, in addition to the usual rates, should provide substantial encouragement for the early re-equipment of industry.

Scientific Research

" I am also proposing to allow for income-tax purposes expenditure on scientific research. The proposals follow generally the provisions in the U.K. Finance Act of 1944, which have been described by the Chancellor of the Exchequer as ' a comprehensive attempt to relieve from taxation altogether funds devoted by industry to the support of fundamental research, to the translation of laboratory research to production and to the full-scale development of the product.' The proposals, in brief, are the allowance of current research expenditure as it is incurred, the allowance of payments to recognized research bodies and institutions and the allowance over a period of five years or over the life of the assets, if shorter, of research expenditure of a capital nature."

Sterling Balances

Regarding negotiations with the U.K. on the question of the sterling balances, the Finance Member stated that he had had preliminary talks with H.M.'s Treasury officials. These conversations were necessarily directed towards exploring the background for future discussions and the indication of a suitable time-table for more definite negotiations, " since many of the material data were still incomplete and uncertain, particularly the exporting capacity of Great Britain in the immediate post-war years on the one hand and the development requirements and absorbing capacity of India on the other." The vicissitudes of the war in the West have, he said, "disturbed the provisional time-table foreshadowed at these talks and I do not anticipate that any negotiations can be usefully entered upon until after the end of the war with Germany." In view, however, of the " lack of definition at this stage of our own development programme " he did not think that the delay should be prejudicial to India's interests. " Indeed, it may well prove necessary that any negotiations to be carried on," he said, " should in the first instance be of a tentative character and should secure both parties an agreed opportunity for review at a later stage when firmer data may be expected to be available."

Commercial Reaction

The business community, which had expressed concern in the past over India's sterling accumulations, was disappointed at the news that the negotiations regarding the liquidation of sterling balances would not be started with Britain until the end of the war in Europe. It felt that at least a portion of the balances should have been immediately utilized for the importation of more urgent capital goods and essential consumer goods from Britain. It was also considered that the accretion of dollar balances at the rate of 20 million a year was a poor consolation to a country which had put all its eggs in one basket so far. The moderate section, however, was of the view that the Finance Member's statement that the delay in negotiations with His Majesty's Government would not be " prejudicial to India's interests " was sufficiently reassuring.

The relief proposed to be given to industries in respect of depreciation allowance for income-tax was, however, considered to be a half-hearted measure. Sir Akbar Hydari himself recognized the other day that the present multiple shift working involved heavy strain on machinery and that due consideration would have to be given to the problem of making satisfactory provision in respect of depreciation rates to cover the greater wear and tear and so to make possible rehabilitation after the war. The rates of depreciation allowance now laid down may be all right for single-shift working, but are inadequate for additional shifts; at present the depreciation allowances for an extra shift are restricted to a maximum of 50 per cent. of the normal allowance, which, it is feared, is absolutely inadequate to cover the abnormal depreciation resulting from the machinery's being "worked to death" on war and other orders. The suggestion of the Millowners' Association, Bombay, was for the continuation of the existing rates for single shift of 9 hours, doubling the existing rate for double-shift working not exceeding 18 hours in all and 2½ times the present single-shift rate for treble-shift working exceeding 18 hours.

Depreciation allowances, further, should be based on replacement costs, and not as now on written-down values, which, it is universally admitted, bear no relation whatsoever to replacement costs. The special depreciation allowance urged should not, it is pointed out, be deducted from the written-down values, so that the annual depreciation allowance in subsequent years might not be adversely affected.

In view of the foregoing representations, the Government of India appointed a committee, consisting of Sir John Sheehy (Chairman), Mr. C. W. Ayers, Sir Frederick Stones, Mr. M. K. Vellodi, Mr. D. M. Passmore and Mr. J. B. Greaves, to determine whether the textile industry was justified in asking for an increased rate of depreciation.

The Indian cotton mill industry wanted some form of financial assistance from the E.P.T. collected by Government to compensate the high prices which may have to be paid on replacements and renewals in the post-war period. They desired that the expenditure incurred in re-converting the industry to the post-war footing should be allowed as expenditure and adjusted in the last E.P.T. assessment if such conversion took place within a specified period after the termination of the war or the removal of the E.P. tax, whichever was later—Government have agreed to it if the reconversion took place in the E.P. tax chargeable amounting period, otherwise, they say, the matter will have to be considered in conjunction with other circumstances. Further, where a mill had set aside a special sum for repairs and renewals, that should be allowed as a deduction for the purposes of the E.P. tax. The relief, it is claimed, should be liberal enough to allow the industry the cost of putting in the genuine spare parts. The relief at present extended to building, plant and machinery which had been provided as part of the war effort and which are to be scrapped should, it is urged, be extended to cover any loss in value even in cases where equipment might continue to be in use. Moreover, if the valuation of stocks taken for the purpose of assessment of E.P. tax in its last year was not realized within a reasonable time then the assessee should be allowed to reopen the last E.P. tax assessment with a view to setting off the losses arising from the drop in valuation. This permission to reopen assessment should be extended also to cases where an assessee proves within a reasonable time that when he closed the accounts he did not have sufficient information at his disposal to ascertain the exact loss.

The Finance Member's contention that the tax system is calculated to ensure that the financial reserves of industry are not depleted is vehemently disputed by commercial and industrial circles generally, while a suggestion was made in the Assembly that the new depreciation allowance must take effect, not from 31st March 1945 as is proposed, but from 31st March 1944. As regards the relief given in respect of expenditure on research, it is felt that the allowance must be permanent and not limited to five years, that no narrow interpretation should be placed on what research is related to a particular industry and what not so related, and that Government should not be the final judges of what is legitimate expenditure under this head.

Workmen's Compensation Act

By G. R. DESAI, M.A.

(*Specially Contributed*)

BY this article the writer does not intend to criticise the Act; he, however, feels that the Act is imperfect. The preamble reads " Whereas it is expedient to provide for the payment by certain classes of employers to their workmen of compensation for injury by accident it is hereby enacted as follows:— " The word compensation is defined by the Act as 'Compensation means compensation as provided for by this Act.' " In absence of definition of compensation the common meaning of the word compensation, namely, 'recompense' has to be accepted. The Act deals with the computation of the compensation amount. The Act also sets out the upper limit of the compensation amount but does not say anything as to why it sets out a limit on the extent of the compensation amount.

There are two main points at issue, namely:—(1) The compensation awarded to a workman following a disablement is a lump sum. This lump sum is the same for all workmen irrespective of their ages if their wages are equal and if the extent of the disablement they incur is the same. Thus a worker aged 20 or 30 or 50 will be awarded a fixed amount, say, Rs. RW where R is the compensation amount per unit wage and W is the wage of the worker.

(2) The compensation amount to be awarded is made to depend on the wage earned by a workman and wage has been defined by an omnibus definition by 2(*m*) of the Act as under:— " Wages includes any privilege or benefit which is capable of being estimated in money other than a travelling allowance or the value of any travelling concession or a contribution paid by the employer of a workman towards any pension or provident fund or a sum paid to a workman to cover any special expenses entailed on him by the nature of his employment."

This omnibus definition of wages besides the normal wages includes tea, tiffin, grains, uniform, *sukhadi*, *bucksheesh*, bonus, dearness allowance and any other circumstantial relief, all of which are being capable of being estimated in money and all of which can be construed to be regarded as privilege or benefit. This definition of wages, therefore, differs from one given under the Payment of Wages Act whereas both the Acts apply in many cases to the same factory or institution or employer. These definitions cannot be reconciled with each other and for purposes of both Acts the amounts of wages of the same workmen will be different from each other. The Excess Profit Tax Draft Rules give also definition of wages which is quite different from these definitions. There should be uniform definition for different Acts passed by the Legislature.

The computation of compensation falls under two main categories: Accident resulting in death or resulting in permanent total disablement. In 1923 the compensation for both of these is set out to be equal to 30 months and 42 months wage respectively of the workman who is a victim of the accident. Schedule IV of the 1923 Act gives adjustment in wages of the workman. The Amended Act of 1934 gives computation of compensation for these by Schedule IV where for wages from 0 to 18 compensation amount is higher than that equivalent to 30 months or 42 months' wages, but higher the wages the position taken up in 1923 for computing compensation is accepted in principle. In case of death the compensation to the beneficiaries of the workman meeting death due to accident is small and accords only a temporary relief. In case of permanent total disablement the workman and his dependent are also accorded relief for a limited period not exceeding 3½ years. For permanent damage the Act provides for temporary relief which does not cover even the ordinary meaning of compensation. The Act must provide for compensation commensurate with damage.

The workman's retiring age in India should be 55, for thereafter, for all manual purposes, the infirmities which old age brings with it render the workman less efficient. A workman not incurring a permanent total disablement would work till the retiring age and earn his wages but in the event of his incurring a permanent total disablement he is prevented from earning his wages for the rest of his life, i.e., if he is of 23 years, for the 32 years he would have earned his wages if the event did not happen, but the Act provides for compensation amount which would enable him for only 3½ years instead of 32 years to maintain him. For the rest of his life there is a blank for him. It will therefore be no justice to the workman if compensation amount is not made to depend on age. The present limit set out for compensation amount is quite inadequate. The amount must be higher and must vary with the age of the workman. The wage as defined by the Act does not represent the intrinsic earning capacity of the workman. It combines intrinsic as well as circumstantial earning capacity of the workman. This is not so in life. The dearness allowance for example, is a temporary measure of relief. It has nothing to do with the intrinsic earning capacity of the workman or as a matter of fact of an employee. An employee whose salary is, say, Rs. 200 has earned by a stroke of luck Rs. 10,000 on the stock exchange. This does not change the intrinsic earning capacity of the employee. As for dearness allowance or some such circumstantial relief (on account of famine in a particular area which is the scene of employment or some such cause) it being same for all employees does not represent the intrinsic earning capacity of the workman. The points set out below deserve to be considered:–

(1) The present compensation amount is inadequate.

(2) The compensation amount must be made to depend on the age of the workman.

(3) The compensation amount must be made to depend on the intrinsic earning capacity of the workman.

(4) If compensation amount is sought to be paid for the circumstantial earning capacity of a workman it must be made to depend on expected duration over which the circumstantial relief will be continued to be accorded and should be in proportion, the factor of proportionality being the ratio of the expected duration over which the circumstantial relief spreads to that of the length of period over which the permanent total disablement lasts (taking 55 years of age as retiring age).

(5) The compensation amount should not be paid in a lump sum but be paid in monthly instalments as the latter mode will not defeat the purpose of the Act. There is always a danger of the lump sum being misused and squandered away or being paid away to defray existing debts.

(6) All amounts of compensation as a result of death or permanent total disablement must be lodged with the Commissioner irrespective of any agreement arrived at between the employer and the person under a legal disability or the beneficiary or beneficiaries of the deceased workman.

(7) The employer or the insurance company with whom the employer has taken out an insurance policy under the Workmen's Compensation Insurance Scheme must lodge with the Commissioner the compensation amount in lump sum as soon as the claim of the claimant is entertained and the Commissioner must forthwith invest the sum so received reproductively for the purpose of paying the compensation amount in instalments to the claimant who may be the person himself under a legal disability or the beneficiary or beneficiaries of the deceased workman. It is proposed to enter upon mathematical details of computation of compensation amount in what follows:—

Let C be the lump sum amount of compensation per unit wage per annum of the workman to be awarded to the claimant. This C will be different for different ages of the workman incurring a legal disability. For all purposes a legal disability is taken to mean permanent total disablement in what follows, as compensation corresponding to death or permanent partial disablement can be derived, as shown hereafter, from C when C is computed.

Consider a person aged A under a legal disability. Then compensation per unit wage per annum to be awarded to him will be C_A. Let his normal wages be p per annum and let q represent his annual circumstantial earning. Under the existing definition of wages in the Workmen's Compensation Act the compensation amount will be $(p+q)\ C_A$, but as the circumstantial earning may or may not be earned by him for the remaining 55-A years of his life, he need not be given qC_A amount of compensation corresponding to this part of earning. It will have to be assumed that x years will be the duration during which the workman will receive the circumstantial wage. The compensation amount in this case, therefore, must be in proportion. The compensation amount must therefore be

$$pC_A + q.\frac{x}{55\text{-}A}C_A$$

$$=\left(p+\frac{q\,x}{55\text{-}A}\right)C_A$$

The distinction pointed out here will be lost when $x = 55\text{-}A$. Corresponding to the circumstantial wage the smaller will be the compensation amount the smaller the A is because $\frac{x}{55\text{-}A}$ decreases as A decreases. Having settled the amount of compensation for circumstantial wage it is proposed to settle the value of C_A. The present compensation amount per unit wage per annum is inadequate and is not dependent on age. For the purpose of computation of compensation it is assumed that the unit wage per annum is paid at the end of the year and that for convenience the unit wage is paid in 12 monthly instalments each $=1/12$. The present value of unit will therefore be calculated at an assumed nominal rate of interest. If the accident did not take place the workman aged A is supposed to have continuously served and earned the average wage per annum which he had earned during the one year prior to the happening of the accident. Therefore the compensation per unit wage per annum will be the present value of an immediate annuity—certain of unity for 55-A years at a certain assumed rate of interest and symbolically it is $a_{\overline{55\text{-}A}|}$. It is assumed that the nominal rate of interest (which is supposed to be equal to effective rate of interest) is 6 per cent.

$$\therefore\ C_A = a_{\overline{55\text{-}A}|} \text{ at 6 per cent.}$$

The compensation amount C_A per unit wage per annum must be lodged with the Commissioner. This lump sum amount is to be invested reproductively by the Commissioner and the claimant is to be paid back 55-A yearly instalments each $=\frac{C_A}{55\text{-}A}$. This means that the lump sum so received is not invested reproductively and yet it will leave a big margin of reserve as the lump sum so received is bound to be invested reproductively at a certain rate of interest. The margin of reserve in this case per unit wage per annum when 55-A instalments each equal to $\frac{C_A}{55\text{-}A}$ are paid off will be $=C_A\left(1+i\right)^{55\text{-}A}-\frac{C_A}{55\text{-}A}\,S_{\overline{55\text{-}A}|}$ the assumption being that instalments are paid yearly and that C_A is invested at a certain rate of interest. If it is invested in $3\frac{1}{2}$ per cent. Government paper and if $A = 29$ then $C_A = 13.0032$

$$(1+i)^{55\text{-}A} = (1+i)^{26} = 2.44596$$

$$S_{\overline{55\text{-}A}|} = S_{\overline{26}|} = 41.3131$$

and the margin

$$= C_A\left[\left(1+i\right)^{55\text{-}A} - \frac{1}{55\text{-}A}\,S_{\overline{55\text{-}A}|}\right]$$

$$= 13.0032\ \left[2.44596-\frac{1}{26}.41.3131\right]$$

$$= 11 \text{ to the nearest integer.}$$

The payment of compensation amount by instalments, the claiming of the compensation amount from the employer in a lump sum and details and routine will require a bigger staff involving recurring annual expenses and these can be easily offset against the margin leaving still a substantial margin. The margin so accumulated and summed up will develop into a huge reserve fund which may be successfully utilised in improving living conditions of workmen.

As an illustration let us find the yearly instalment of compensation amount to be paid to the person aged 29 incurring a permanent total disablement whose monthly normal wage is 25 and whose circumstantial monthly wage is 52. Assume that the duration over which the circumstantial wage earning lasts is five years.

The yearly instalment is

$$= \left[\ p\,C_A + q\,\frac{x\,C_A}{55\text{-}A}\ \right] \Big/ (55\text{-}A)$$

$$= \left[\ p + \frac{q\,x}{55\text{-}A}\right]\frac{C_A}{55\text{-}A}$$

$$= \frac{13.0032}{26}\left[\ 12\times25+\frac{12\times52\times5}{26}\right]$$

$$= 150 + 60 \text{ roughly} = 210 \text{ roughly.}$$

For the sake of facility, if monthly instalment is paid the person under legal disability will receive Rs. 17-8 every month till retirement or death, whichever is earlier.

Under special circumstances, if the claimant requires a lump sum an application should be made to the Commissioner and if the Commissioner is of the opinion that a certain lump sum need be paid to the claimant, one-third of the annuity may be commuted and if the application is made B years after the happening of the accident the commuted amount per unit wage per annum will be $=\frac{1}{3} C_A \, a_{55-A-B}$ at 3½ per cent. and the yearly instalments will reduce to $\frac{2}{3}$ C_A per unit wage per annum.

The compensation amount for death corresponding to C_A the compensation amount for permanent total disablement is

$$\theta C_A \text{ where } O<\theta<1$$

The value of θ as computed in the present Act is $\frac{30}{42}=\frac{5}{7}$.

To evaluate compensation amount for permanent partial disablement corresponding to C_A one has only to make reference to Schedule I. If Y represents the loss percentum of earning capacity corresponding to C_A then the compensation amount is YC_A.

The older the workman is, the higher should be his earning capacity. In the foregoing discussion this fact is not taken into consideration for unfortunately the wage scale for workmen everywhere has not been fixed, but, considering the progress the world is making in this direction, the day is not far distant when unequivocally defined wage-scale assuring normal living to workmen will come into being. It is then easy to make a corresponding revision.

If the amount of compensation to be awarded be revised and fixed as is provided for herein there will be a corresponding change in the amount of premium to be paid by an employer to the insurance company. Thus let P be the amount of premium to be paid for unit wage per annum. Let EK represent the total number of workmen aged K and let E be the total of all workmen so that $E=E16+E17+\dots+E55$. Let q be the circumstantial wage of each workman—assumed to be the same for all so that if Q be the total of circumstantial wage of all workmen then

$$\begin{aligned} Q&=(E_{16}+E_{17}+\dots\dots+E_{55})q \\ &=qE \end{aligned}$$

Let D be the average age of the workman so that

$$D=\frac{16.E16+17.E17+55.E55}{E}$$

The total premium the employer will have to pay is

$$=P\left(N+\frac{x}{55-D}Q\right)$$

Where N is the total of normal wages.

The more statistically true way of defining D will be as under :—

$$\frac{x}{55-D}\times C_{55-D}\,Q=\Big[\frac{C_{16}}{55-16}.E_{16}+\frac{C_{17}}{55-17}E_{17}+ + \frac{C_K}{55-K}.E_K+\dots+\frac{C_{55-x-1}}{55-x-1}E_{55-x-1}+ \left(E_{55-x}+E_{55-x+1}+\dots+E_{55}\right)\frac{C_{55-x}}{55-x}\Big]xq.$$

The last term in the bracket signifies that all workmen aged 55-x and above will each get compensation corresponding to circumstantial wage per unit per annum $=\frac{x}{55-x}.C_{55-x}$

Though there is a difference in the two values of D it is advised that the former value, which is easier to compute, be taken.

◆

"Comfortable" Colours for Interiors of Mills

WHAT suitable paint in harmonious colours can do in transforming the appearance of the interior of mills was shown by the Cotton Board in an exhibition in Manchester. For example, the ends of many machines look better with a coating of paint. The section devoted to the latest lighting methods was particularly interesting to management and work-people alike. The importance of preventing eye strain in every way possible is obviously a duty that rests on those responsible for the management of mills. Illustrations were shown of the best ways of lighting rooms so that the operatives can work in comfort.

Central Legislative Assembly Discusses Cloth Control

Passes Cut Motion by Majority

MR. A. C. Datta moved in the Central Legislative Assembly on Monday the 12th March 1945 that the demand under the head "Department of Industries and Civil Supplies" be reduced by Rs. 100 to discuss the cloth and yarn position.

He said that the shortage of yarn and cloth in the country in general and Bengal in particular had become acute. The quota allotted to Bengal was about one-half of the quota given to other provinces. It was reported, he stated, that some women in Bengal had to go almost naked for want of *saris* and committed suicide. *Dhotis* and *saris* were not available in Calcutta. It was also reported that shrouds of the dead were removed from the burning ghats and sold in the market. Bengal's Ministers were going to the villages to preach the use of *khadi* and he hoped that members of the Central Government would follow suit.

Nawab Siddiqali Khan (Muslim League) referred to Sir Azizul Haque's assurance to set up a handloom weavers' board and asked how long it would take for the heavy Government machinery to move in that direction.

Mr. Sami Venkatachalam Chetty (Congress) said that the confusing and contradictory orders issued by the Textile Department itself resulted in the cloth not reaching the consumer. Madras dealers were asked, for instance, to buy from Bombay, but no permits were issued for export of cloth from Bombay to Madras for several days.

The Government did not make any attempt to organize handloom weavers, continued Mr. Chetty, and weavers who used only fine yarn were not supplied with fine yarn.

Smuggling to China

Sir Vithal Chandavarkar (Bombay Millowners' Association), referring to the shortage of yarn and cloth in Bengal in particular, said that Bengal had actually been given 179,000 bales against an allotted quota of 150,000 bales to that province. The shortage of cloth in that province, Sir Vithal thought, must be due to increased smuggling into China, where it was sold at anything up to Rs. 10 per yard. Until recently there was no ban on exports to Tibet and he was told that a lot of cloth had found its way into China via Tibet.

To make the various control orders effective and for equitable distribution of stocks, Sir Vithal suggested that the Provincial Controllers should be under the direction and supervision of the Textile Commissioner. If the Government could remove constitutional difficulties in regard to the Estates Duty Bill surely they could also remove such difficulties for the smooth working of the textile control machinery.

Sir Vithal refuted the charge that the Textile Control Board was dominated by millowners. The Distribution Committee of the Board had only three or four members representing the industry. He asserted that the scheme for distribution had not been prepared by the Board but by the Government of India.

The industry, Sir Vithal declared, was anxious, first, to meet the needs of domestic consumers; but the Government for political reasons, wanted textiles to be exported to certain Middle East countries where there were no price controls and where the respective Governments made as much as 75 per cent. profit over cloth purchased at controlled rates from India.

The shortage of yarn, in his opinion, was due to hoarding of yarn by master weavers.

Cloth Situation

Sir Azizul Haque, the Commerce Member, said that the handloom weavers in the country had for years a miserable existence. He was responsible for the decision that their production should not be texmarked, and it would be a gain to the country if they were able to rehabilitate themselves by taking advantage of the present war conditions. There was now an overall shortage of yarn in the country, and the shortage was more keenly felt in Bengal because the industry was not developed there. Bengal was the largest consuming centre in the country, but it produced the least quantity of textiles. However, handloom production had increased by 60 per cent. compared to 1935-36. The Commerce Member said that there was practically no export of fine yarn from the country. Most of the fine yarn produced was consumed by the mills themselves, and whatever was left over was given to the handloom weavers. The Government were concerned with the total output of textiles rather than how they were produced.

Sir Azizul Haque said that the pre-war consumption of cloth was about ten yards per head, but the Government were able to supply more than ten yards for the provinces. During the last seven months, they were able to give Bombay 13.9 yards per head. He explained the recently introduced system of licensing wholesale dealers in regard to distribution, and said that to-day there was not a single yard of cloth which left the mill which was not stamped with the wholesale and retail price and the date within which it should be disposed off. It was a big task stamping over 5,000 million yards of cloth divided into thousands of varieties, and members should not be guided by isolated cases of malpractice. The Government would not hesitate to take firm action against hoarding and profiteering.

In regard to cloth rationing, the Commerce Member said that the question presented extraordinary difficulties. It was not possible to have uniformity of cloth for distribution. He was, however, investigating the matter.

Semi-Defence Services

Mr. K. C. Neogy (Nationalist) said that the requirements of certain semi-defence services, such as the A.R.P. and the Red Cross, and hospital requirements were not met out of the 900 million yards allocated for the defence services, but out of the quota allotted for civilian consumption. He asked what was the Government's policy in regard to exports. The Commerce Member had stated that practically no yarn was exported. It was immaterial whether the exports were of yarn or cloth. They knew the Government were exporting 6,000 million yards of cloth. The Export Committee of the Textile Control Board had suggested that the Government should reduce the exports.

Mr. Neogy said that in the matter of coal supply, preference had been given to the jute industry, while about 48 million yards of cloth were lost to the country this year owing to lack of coal supply to the textile mills.

In regard to the *per capita* consumption of cloth, Mr. Neogy referred to the report of the Fact Finding Committee of the handloom industry, and said that in 1938-39 it was stated that the consumption was 15.4 net yards and he did not know where the Commerce Member got his figure. Apart from devising a new scheme for distribution and leaving it to be administered by the provinces, he asked whether the Textile Commissioner would have any actual supervisory authority over the provincial agencies. The central control, he said, should be real and not illusory.

The cut motion was pressed to a division and was passed by 58 votes to 45.

PROFITEERING AND HOARDING IN BENGAL

Questions Raised in Provincial Assembly

AN exciting two-hour debate took place in the Bengal Legislative Assembly on 22nd February 1945 on an adjournment motion moved by the Opposition to discuss "the failure of the Government to prevent the acute and unprecedented cloth famine that has overtaken the province at the present moment." The motion was rejected by 104 to 65 votes.

Mr. Atul Chandra Sen (Unofficial Congress), who moved the motion, characterized the cloth famine as "devastating." In his own district (Dacca) he had known men spending months with tattered rags tied round their bodies. He had also known cases of women not being able to come out of doors, having practically no cloth to cover themselves. He thought that the famine could have been averted by the Bengal Government to some extent. What was necessary was to point out to the Central Government the injustice that had been done to Bengal by allotting only 10 yards *per capita* while other provinces had got a much higher quota and sincerely to try for an equitable distribution of supply through some sort of rationing and prevent a portion of it from going into the black market.

Mr. Patiram Roy (Scheduled Castes) said that there had been cases of suicide by women on their being unable to cover themselves for want of cloth.

Dr. Nalinaksha Sanyal (Official Congress) said that in the matter of distribution of cloth, which was the primary responsibility of the Provincial Government, not only had the Provincial Government failed in the discharge of their duties in these respects, but they had also set up a machinery which was corrupt from top to bottom and which should be scrapped. Black markets, he alleged, were freely going on in almost every sphere of textiles in which some of the Government officials were also involved.

Replying to the debate, Mr. H. S. Suhrawardy, Minister for Civil Supplies, admitted that there was a cloth famine in the province, but that was very largely due to the inadequate supply. The quota allotted to Bengal was very low: he had vigorously protested against that, and if justice was not done to Bengal in this regard, the province was in for a very bad time indeed.

New Cloth Scheme

The Central Textile Board was proposing a new scheme which envisaged the freezing of cloth from the beginning and then controlling distribution. When the new scheme would come into operation the Government, he said, would be in a position by controlling the quota-holders to distribute whatever cloth they had got on an equitable basis. Under the new scheme, the Minister was almost certain they would be in a position to regulate the distribution of cloth much better than before.

The position taken up by the Central Government regarding the allocation of cloth to Bengal was indefensible. He intended, as far as possible, to explore all possibilities of the rationing of cloth, but did not know if they would succeed or how long it might take to enforce it. But in the present limited supply, Mr. Suhrawardy maintained, they would be able to give only one pair of *dhotis* or *saris* per adult, which was hopelessly inadequate.

Referring to the "acute" shortage of cloth in the city and mofussil in the Calcutta Municipal Corporation, Mr. H. K. Ganguly said that people were not getting any cloth in the open market, while there were tons of cloth in the black market, which, he said, was flourishing in every field of textiles. He added that cloth from bodies taken to the burning ghat was being sold in the market straightaway. In the interest of the health of the city such practices should be stopped, he said.

The Mayor said that the Chief Executive Officer would take action in the matter.

Sensation in Bombay—Official Reactions

The report about cloth famine in Bengal has created a sensation in Bombay. Well-informed circles believe that the trouble is almost entirely due to the lack of effective control over distribution.

It is pointed out that hoarding and profiteering in cloth has been rampant in Bengal. Cloth is being increasingly smuggled to China where Indian cloth is being sold at the fancy rate of Rs. 10 per yard. Until recently, there was no ban on exports of cloth to Tibet with the result that large consignments of Indian piecegoods found their way from Kalimpong to Tibet on mules and yak resulting in a depletion of the stocks meant for Bengal.

In Calcutta, which is the main distributing centre, black markets are stated to be flourishing. Besides the usual method of receiving an excess value in advance and delivering the cloth on payment of the control price, the trade has adopted other ingenious methods. It is stated that business houses engaged in the dyeing and printing of cloth have multiplied by nearly five times during the past three years because they provide a useful channel of evading the price control over cloth. Another well-known method of evasion is to sell only ready-made garments.

All this is believed to be due to lack of effective control on the part of the Provincial Government. A Bengali business man in Bombay told a Press representative that Bengal had no Textile Controller until a year ago and even to-day his staff was insufficient to cope with the work of supervision. Charges of corruption were also not being infrequently made. According to his information, there was no special branch of the C.I.D. to enforce the control orders until May last, and the number of prosecutions in 1944 was very small as compared with the size of the province, the extent of black marketing and the action taken in other provinces.

Excess Supply

Inquiries in authoritative circles show that since Assam was constituted an independent unit of the Bengal deficit zone, the province of Bengal was entitled to receive during the seven months ended January last 120,050 bales of cloth, while it actually received about 179,034 bales, representing an excess supply of 58,984 bales of cloth over the actual quota to which the province was entitled. Besides, Bengal is allowed to retain its own production of about 20,000 bales per month.

As regards the criticism that the rate of 10 yards per head per annum is inadequate for Bengal and certain other provinces, it is pointed out that the normal consumption of cloth in India during the pre-war days used to be only about 16 yards per head per annum. With the mills now producing their maximum, only about 4,800 million yards of cloth is available for civilian consumption. This figure includes handloom production, but does not take into account woollen cloth. Therefore, on the basis of the population, according to the 1941 census, not more than 12 yards per head per annum can be had for distribution all over the country.

Rates of Consumption

It must be admitted, it is argued, that the rates of consumption of cloth differ in different provinces. Taking this factor into consideration, the Government have decided to rationalize the sacrifice of consumers in each province and not ration cloth. For example, where Punjab normally consumed 22 yards of cloth per head a year, the province now gets a quota on the basis of 18 yards per head: Bombay receives 18 yards instead of about 25: and Bengal ten yards instead of 11½ or 12. The sacrifice has thus been as equitably distributed as possible among the various consumers in different provinces.

The allotment and the basis of the quota per head does not necessarily mean that the purchase by each individual will be restricted to that quantity. It means that the total allotment for a province is on the basis of so much per head. In calculating the total quota for a province, children, servants, working class, villagers, all have been taken into consideration, the majority of whom have never been known to consume as much cloth, as has been allotted per head. Therefore, it is argued that there is no justification whatever for a few moneyed people to rush and hoard cloth, thus preventing other consumers from getting their normal requirements.

Cloth to be Rationed in Bengal

Mr. H. S. Suhrawardy, Minister for Civil Supplies, Bengal, indicated at a Press Conference that full-fledged rationing of cloth would be in operation throughout the province in about six weeks.

Attributing the present acute shortage of cloth in Bengal chiefly to the " vacillating policy of the Government of India " in relation to the textile interests, he said that towards the end of August 1944 he attempted to adopt the policy of freezing all cloth coming into Bengal and distributing it throughout the province. He did so even though there was no assurance of supplies.

But the representatives of the Government of India came to Bengal at about that time and, in spite of his assurance that there was no way out but complete control by Government, stated that the normal trade channel must be utilized and the trade must be given a further chance to distribute cloth. He had thus to abandon his scheme.

The Bengal Provincial Textile Control Advisory Board adopted a resolution recently recommending to the Government of Bengal to take immediate steps for possession of all kinds of cotton piecegoods and make arrangements for their distribution throughout the province on a rationed basis.

Black Markets in Textile Trade to go

The Bombay Cotton Cloth Trade Regulation Order, 1945

THE Bombay Cotton Cloth Trade Regulation Order, 1945, came into force in Bombay City, Bombay Suburban District and Ahmedabad City and suburbs from 1st March. A notification bringing the Order into force in these areas was published in the *Bombay Government Gazette*, Part I (Extraordinary), dated 23rd February.

The Order will be extended to other parts of the Province in due course. Meanwhile the existing Bombay Cotton Cloth Dealers Licensing Order, 1943, will continue to operate in those parts. Licences already issued under that Order will continue to be valid.

In Bombay City and Ahmedabad, licences already granted under the old Licensing Order will remain in force in the case of persons who apply for licences under the new Order within one month after 1st March until a licence under the new Order is issued or the applicant is informed that a licence cannot be granted to him. Dealers should, therefore, apply in good time for licences on the prescribed application form, which can be obtained from the office of the Provincial Textile Controller in Bombay City and from the office of the Assistant Textile Controller at Ahmedabad.

After the introduction and the necessary definitions, the Order proceeds to lay down:

Save as hereinafter provided no dealer shall sell, or store for sale, cloth except under and in accordance with the conditions of a licence granted by the licensing authority.

(*a*) For the purposes of this Order there shall be six classes of dealers, viz.:—

(i) " A class dealer," meaning a dealer who buys cloth from a manufacturer in mill-packed bales or cases and sells it or stores it for sale in such bales or cases; he shall obtain a licence in Form II.

(ii) " B class dealer," meaning a dealer who buys cloth from a person other than a manufacturer in packed bales and sells it or stores it for sale either in packed bales or split bales; he shall obtain a licence in Form III.

(iii) " C class dealer," meaning a dealer who does retail business and sells or stores cloth for sale to persons other than licensees, he shall obtain a licence in Form IV.

(iv) " D class dealer," meaning one who carries on business in cloth as an agent; he shall obtain a licence in Form V.

(v) " E class dealer," meaning a hawker; he shall obtain a licence in Form VI.

(vi) " F class dealer," meaning a dealer not included in classes A to E; he shall obtain a licence in Form VII.

(*b*) A dealer may at one and the same time belong to one or more of the above six classes if the licensing authority so permits.

Applications for licences under this Order shall be made to the licensing authority in Form I.

The licensing authority may, for reasons to be recorded in writing, refuse to grant a licence.

Notwithstanding anything contained in this Order the Government of Bombay may, without assigning any reason, direct that any application for a licence be refused.

The licensing authority may direct a dealer holding stocks of cloth to supply to specified dealers or persons, specified quantities of cloth at specified rates within a specified time, and may from time to time issue such general or special directions to a dealer with regard to the storage, sale and transport of cloth as it may deem fit.

Every licensee shall, by the 10th day of February, May, August and November, in each year, submit to the licensing authority in Form IX a true and correct statement of stocks of cloth held by him on the last date of the preceding January, April, July and October, respectively.

A " C " class dealer shall display prominently in his place of business a list showing the maximum retail prices in respect of all such kinds of cloth in his shop or store as have prices stamped thereon and shall not on demand and offer of the maximum retail price withhold from sale any such cloth to any person.

An " E " class dealer shall carry a list showing the maximum retail prices of all such kinds of cloth carried or exposed for sale by him, as have prices stamped thereon.

Every dealer other than a hawker shall issue to every customer a correct cash memorandum or credit note, as the case may be, of which he shall keep a duplicate which shall be produced by him for inspection on demand by the licensing authority or any officer authorized by it in this behalf, and which shall contain the following details:—

Name, licence number and address of the dealer; date of transaction; name and address of purchaser; detailed description of goods sold; quantity sold; rate at which sold; unit of sale; total price for each item; and salesman's signature.

The duplicates of cash memoranda and credit notes shall be preserved for one year from the date of issue.

A licensee shall surrender his licence to the licensing authority for cancellation within three months after the date on which he closes his business and at the time of so surrendering the licence declare the stock held by him on the said date.

The licensing authority may, without prejudice to any other action that may be taken against a licensee for supplying incorrect information on his application for the grant or renewal of a licence, or contravention of any of the provisions of this Order, cancel or suspend his licence after such inquiry as it deems necessary.

Notwithstanding anything contained in this Order, the Provincial Government may, without previous notice or assignment of any reasons, cancel or suspend any licence or class of licences and such cancellation or suspension shall not entitle the licensee to any compensation or the refund of any fees paid in respect of any such licence.

The licensing authority may in its discretion cancel a licence under which no business is carried on for more than three months.

The licensing authority or any officer authorized by the Government of Bombay in this behalf may, if such authority or officer has reason to believe that any person has contravened any provision of this Order,—require any person to give any information in his possession in respect of any business carried on by himself or any other person; inspect or cause to be inspected any books or documents, as well as stocks of cloth, belonging to or under the control of any person; enter and search, or authorize any person to enter and search, any premises and seize, or authorize any person to seize, any article in respect of which the authority or officer has reason to believe that a contravention of this Order has been committed.

Under the scheme, there will be " A class " quota-holders who will buy the cloth from the mills and sell it to " B class " quota-holders by charging 3 per cent. commission. The latter, in turn, will be allowed to have a margin of 6 per cent. They will be required to forward particulars of the deliveries to the Provincial Textile Controller who will keep a check on the dealings.

Provincial Controller Explains

Explaining the Bombay Cotton Cloth Trade Regulation Order, which came into force in Bombay City, the Bombay Suburban District and Ahmedabad on 1st March, Mr. Thakore said that it would enable Government to exercise better control over the channels of distribution. Under the Bombay Cotton Cloth Dealers' Licensing Order, 1943, over 46,000 licences had been issued in the province, inclusive of 17,000 in the city alone. Besides the fact that this number was too unwieldy, that order made no distinction between wholesale and retail dealers, and wholesalers could also trade as retailers. The new order remedied this defect by classifying them and providing for separate licences for wholesalers, retailers, commission agents and hawkers. Applications for licences under this order were being received, and certain principles had been laid down for substantially reducing the number of licences with a view to enforcing stricter control. The applications for licences would be thoroughly scrutinized with a view to eliminating one dealer obtaining several licences in his own name or under different names. No licences would be granted to persons found guilty of malpractices.

Trade Criticism

Resolutions protesting against the " excessive " licence fee of Rs. 500 prescribed for commission agents under the Bombay Cotton Cloth Trade Regulation Order and pleading for reducing it to Rs. 25 only have been passed at a conference of the representatives of the Marwadi Chamber of Commerce, Bombay, and six other bodies interested in the trade.

By another resolution, the meeting has pleaded for postponing the enforcement of the Order till 1st July and for exempting the "D" class licensees from the provision of clause 23 of the Order which provides for cancellation of licences of those who do not carry on their business for more than three months.

The Committee of the Indian Merchants' Chamber, Bombay, in the course of a communication to the Secretary to the Government of Bombay, Finance Department, protests against the " defects " and " omissions " in the Bombay Cotton Cloth Trade Regulation Order, 1945. The Committee regrets that before issuing the revised order, Government did not consider it advisable to circulate the draft to the interests concerned for eliciting opinion.

The Committee urges upon the Government that the provisions of clauses 8, 11 and 22 of the Order be amended in accordance with its suggestions. Whether for refusing to grant applications for licences or for suspending or cancelling licences already granted, the Chamber urges that the reasons therefor should be presented in writing and that in either case appeal should lie to the higher authorities. It urges that the proposed scale of fees, too, should undergo a drastic downward revision if the trade is not to be unnecessarily penalized.

Arrangements in Ahmedabad

With effect from the 1st of March, 1945, all cotton cloth has been frozen in the hands of quotaholders in Ahmedabad.

Such cloth will only be permitted to be sold to Deficit Zones in pursuance of purchase authorities granted by the Textile Commissioner, Hararwala Building, Wittet Road, Ballard Estate, Bombay, to merchants who have previously been recommended by the Provincial or State Governments of the Deficit Zones concerned for a specific number of bales in the case of each merchant. No person who is not so recommended by a Provincial or State Government will be issued such authorities under any circumstances.

Merchants holding such purchase authorities will be issued Transport Permits with such authorities and they will be instructed to approach the Maskati and Panchkuva Cloth Merchants' Associations, Ahmedabad, who will arrange the procurement of all the bales covered by such purchase authorities. The Transport Permits will then have to be registered by the consignors, who will either be the seller or a commission agent employed by the holder of the purchase authority, with the Millowners' Association, Ahmedabad for transport. The Millowners' Association, Ahmedabad, will then issue orders regarding the delivery of such goods for transport. The consignor must hold a VALID Bombay Government Cloth Dealers' Licence.

It has been arranged with the two Associations that 2,000 bales will be supplied to the Printers' and Processing Associations in Ahmedabad. But it is a condition of such supply that no person will be allowed to process cloth except for the account of the supplier of the goods and after processing, such cloth must be returned to the same supplier.

With regard to the proportions of the different varieties of cloth that are to be purchased by holders of the purchase authorities for supply to deficit zones, the two Associations have in agreement with the Textile Commissioner laid down the definite proportions that shall be purchased by each permit holder for each zone. Merchants must carry out the directions of the two Associations in regard to this matter subject to modifications between zone and zone to suit each zone's special requirements.

Cloth Rationing in Bombay

Partial rationing of cloth has been introduced in Bombay City and Bombay Suburban District with effect from Wednesday the 21st March 1945. A beginning has been made by rationing *dhotis* and *saris* in which there is at present an acute shortage. Every head of a family will be entitled to get two *dhotis* and two *saris* every half-year against his ration card. The scheme will then be extended to mulls and voiles. Besides the licensed retail shops, it is proposed to increase the number of approved shops to 500.

After a lapse of nearly two months, good quality cloth of Indian mills made its appearance in some of the shops in Bombay City on the 10th March 1945. It is believed, however, that the situation will not ease appreciably until the Bombay Cotton Cloth Trading Regulation Order comes into operation on 1st April.

The Government of Bombay, it is understood, have decided to extend the Order to the whole of the province in order to have a stricter control over the distribution of cloth. It is gathered that at least half the number of cloth traders will be eliminated from the trade, but genuine merchants will not be affected. Steps will be taken to put the distribution of cloth on a more rational basis.

To relieve the cloth shortage in Bombay City the textile control authorities have arranged for the movement of cloth into the market from the quota holders with whom it had been frozen.

In the course of his address at the recent Provincial Cloth Dealers' Conference held in Patna, Mr. Vellodi dealt with the demand for fine cloth which had increased considerably during the recent past. The production of such cloth in this country was very limited, and he had informed the Provincial Governments that they should decide which were the centres that should receive fine cloth so that they might be licensed and one would know where to procure such fine cloth. As regards increased production of *dhotis* and *saris* he had the assurance of the Chairman of the Textile Control Board to say that the price had been recently so revised to make it profitable for the mills to produce more *saris* and *dhotis* than they used to hitherto.

The Commission Agents

All commission agents in Bombay City and Suburban Area taking delivery of or holding goods on behalf of quota-holders situated outside the Bombay Surplus Area are required to declare their holdings to the Textile Commissioner in accordance with the notification of the 16th December 1944, as goods directly purchased from a manufacturer.

All such persons are hereby notified that under no circumstances will transport permits be issued to them to enable such goods to leave Bombay. They must, therefore, sell the goods to holders of authorities issued by the Textile Commissioner at a price not exceeding the ex-mill price plus 3 per cent. Any failure to sell such goods to the holders of such authorities will be followed by cancellation of the commission agent's licence in addition to such other steps as may be taken against him.

Notification Regarding Printing of Cotton Cloth

By a notification in the *Gazette of India Extraordinary* dated 6th March 1945, the Government of India have restricted the activities of those who are engaged in printing of cloth, procurement of cloth for printing and disposal of printed cloth.

The notification provides that no one can acquire a cloth printing machine after the 6th March 1945 and no owner of a printing machine may work it for more than 11 hours a day. Mills and power-loom factories owning a printing machine are prohibited from printing any of the cloth produced by them nor can they send out their production for machine or hand printing. No such mill or factory, not having a printing machine, can get more than 7 per cent. of its total cloth production printed outside, only 5 per cent. of its total production being allowed to be hand printed. No owner of a printing machine can purchase cloth for printing though he is permitted to print cloth on a contract basis. No dealer in cloth can get his cloth printed without the permission of the Provincial or State textile authorities concerned. The notification introduces various restrictions on the kinds of cloth which can be printed and the colours that can be used.

COTTON TEXTILES FUND

Administrative Body

The Government of India have announced in a *Gazette Extraordinary*, dated 5th March 1945. the formation of a committee to administer the Cotton Textiles Fund.

The committee will consist of five members to be nominated by the Industries Committee of the Textile Control Board (these nominees need not be members of the Industries Committee themselves), one member to be nominated by the All-India Handloom Board, two members representing exporters to be nominated by the Commerce Department, one member representing cotton interests to be nominated by the Industries and Civil Supplies Department, in consultation with the Education, Health and Lands Department and the Indian Central Cotton Committee, and three official members nominated by the Government.

No fewer than three and not more than five non-official members, who have technical knowledge or educational experience which the Government consider will be of special value to the committee, will be nominated by the Government.

The chairman of the committee will be nominated by the Government from among the five members nominated by the Industries Committee of the Textile Control Board. The secretary will be an officer of the Textile Commissioner's office.

Order on Mill Cancelled

The Textile Commissioner's order controlling the distribution of the production of the India United Mills has been cancelled with effect from 3rd March 1945.

Planning the Card-room of a Fine Counts Mill

By SORAB DINSHAW, L.T.M., *Carding-Combing Assistant*

Kohinoor Mills, Bombay

Mr. Sorab Dinshaw, the writer of this article, passed the examination for the L.T.M. Diploma of the V.J.T. Institute in 1939, *obtaining the Shepherd Memorial Scholarship and other awards for the highest aggregate total of marks in the final year. He then proceeded to England in July* 1939 *for a course of practical training at the laboratories and workshops of Messrs. Platt Bros., Oldham, and Howard and Bullough, Accrington, and obtained first class credentials for his training. Under the auspices of the Oldham Technical College he also obtained the full technological diploma of the City and Guilds Institute of London in advanced cotton carding and spinning.*

Mr. Dinshaw returned to India in December 1940 *and since that year has been employed by the Kohinoor Mills, Bombay, first as Winding-Doubling Assistant for the manufacture of sewings and cable threads, and later as Carding-Combing Assistant.*

Mr. Dinshaw was awarded the Textile Association (India) Gold Medal for 1944 *for an essay on " The scheme of organisation and management, specification of machines and a complete plan of their layout, number of operatives, stores and accessories, for a model cotton spinning mill of* 20,000 *spindles working equally on* 20*s*, 30*s*, *and* 40*s*."

IT does not require much pondering to plan out the installation of ring spinning frames in their stereotype sheds because these frames belong to one category and are almost similar in shape and size.

But the card room with its veritable museum of machines, especially in a Fine Counts mill—sliver lappers, ribbon lappers, combers, and what not!—confronts the mill manager with the most complicated problem of planning.

Generally speaking, spinning and weaving sheds present a neat appearance so far as the layout of machines is concerned. But how often do we find in the card-room the slipshod non-methodical arrangement of a vast variety of machines with such narrow, unseemly, and crooked passages that it would be even difficult for a new recruit, to find his way about? It is not an uncommon sight to find some cards glaringly mixed up with drawing frames, combing equipment dumped in a corner, some rovers arranged at right angles and some parallel to the length of the room, and other hundred-and-one such awful instances!

For a systematic planning, the following items must be borne in mind:—

(*a*) Divide your whole lot of machines in the following order:—(1) Cards, (2) sliver and ribbon lappers, (3) combers, (4) drawing frames, (5) slubbing frames, (6) inters and rovers. It will be noticed that in the group (6) are put together inters and rovers and this is a good practice because of almost similar length, breadth and nature of these two machines.

(*b*) After dividing in these lots, plan your layout in such a way that each lot stands distinct from the succeeding or preceding lot of machines.

(*c*) As far as possible arrange your slubbers in a predominantly central position to be succeeded by the intermingled (yet arranged in a convenient series) row of inters and rovers and preceded by their respective drawings. Some planners prefer to arrange slubbers, inters, rovers, all in one row, but this is rather untidy and the undue amount of fluff emanating from the slubbing flyers is likely to pollute the more finished inter and roving material.

(*d*) Enclose your complete combing equipment, including sliver and ribbon lappers, within dustproof walls, running from end to end and upto the ceiling. Thus the combing equipment and the fine combed product will not be " harmed " by the fluff and fly constantly liberated from the cards (and speeds). Also the combing section, on account of small enclosed space, will be under far better humidity control and there will be far less licking of cotton fibres on the leather detaching rollers.

For the sake of enclosing the combing equipment, a certain departure from general practice is to be made as explained herewith. In Fig. A, construction of a wall all across the length on either side of the combing department is a source of blocking ventilation and light for the carding department in the north and speed-frame department in the south in a storeyed building. But deviating from the standard practice and arranging departments widthway as shown in Fig. B is far more beneficial. Extra walls are put up on either side of the combing department but without blocking light or ventilation in the least for other departments. Hence machines must be arranged as shown in Fig. B only, for obvious reasons.

(*e*) The carriage of material from one process to another must be effected with the greatest ease without covering unduly long distances.

(*f*) Adequately wide passages, free from bends and convenient for moving baskets and cans, and easy to sweep must be provided for in all possible places.

(*g*) Storing of process material and empties: Open spaces must be provided to keep surplus of full and empty cans. Empties must be stored up in racks. For the slubber make racks at the out-end of same width as the slubber, a foot deep and five feet high. For the inters and rovers, erect suitable racks within the walls so that they do not protrude in the alleyway as an obstruction.

(*h*) Ratio of machines and balancing of their output: There is no hard and fast rule as regards the number of machines to be had in each group per each preparation. This depends on the quality, output, space available, experience, etc. Take the example of a slubber doing 1,200 lbs. in 10 hours. This would mean that 12 combers each doing 100 lbs. or 8 combers each doing 125 pounds will be necessary for that slubber. Whereas, in combing, quality is gained in the former, less cost and capital are gained in the latter, in the above instance.

Production must be arranged in such a way that there will be a slight excess of back-stuff for every group, of course without dropping down the efficiency of any department. Take the instance of 1 slubber doing 1,200 pounds and feeding 2 inters to produce 1,100 pounds, which means an excess of 100 pounds of slubbing bobbins over its corresponding inters, or, in other words, ever so often we have at our disposal the production of one slubber and were the slubber to be stopped for almost a day to affect an unforeseen repair or a full-day cleaning, its corresponding inters will not be affected because of the adequate accumulation of back-stuff. Applying this principle all over, cards must produce an adequate excess of material over the requirements of the combers, combers over the drawings and slubbers and so on, depending on the circumstances and judgment of the carder.

(i) Ordering out machinery: It is necessary to sound a strict note of caution in this matter. Do not be completely carried away by the several new devices and patent systems such as speed frames which claim to convert a drawing-frame sliver into a fine-hank roving which can be used directly on the spinning-frame, electric stop-motions on the draw-frames,

North

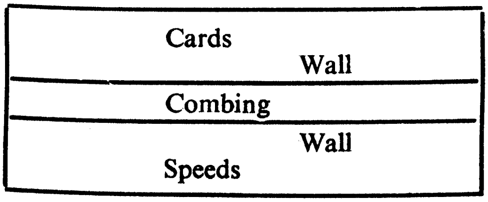
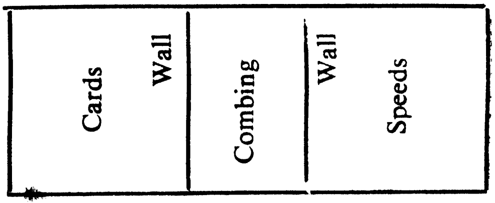


FIG. A.



South

FIG. B.

non-stripping, non-grinding, card-wires, and so on. In this matter I would suggest the adherence to the standard English systems which have proven themselves over long periods, with a sprinkling of the few modern devices. With the general low calibre of our Indian operatives, coupled with their negligence, some of the best and most modern devices have failed to achieve results which their manufacturers claimed for them.

Cards

The modern tendency is to economize in space, capital outlay, etc., by ordering out 45" cards, the widest that can be made. But the flats have a tendency to bend in the centre unless made of sturdy construction. Also the 45" laps are likely to be mishandled in their transit from blow-room to cards. Practical width recommended is 40". Adopt a coiler for 12" cans, for they hold more material, which is an advantage for the next process.

Combing Equipment

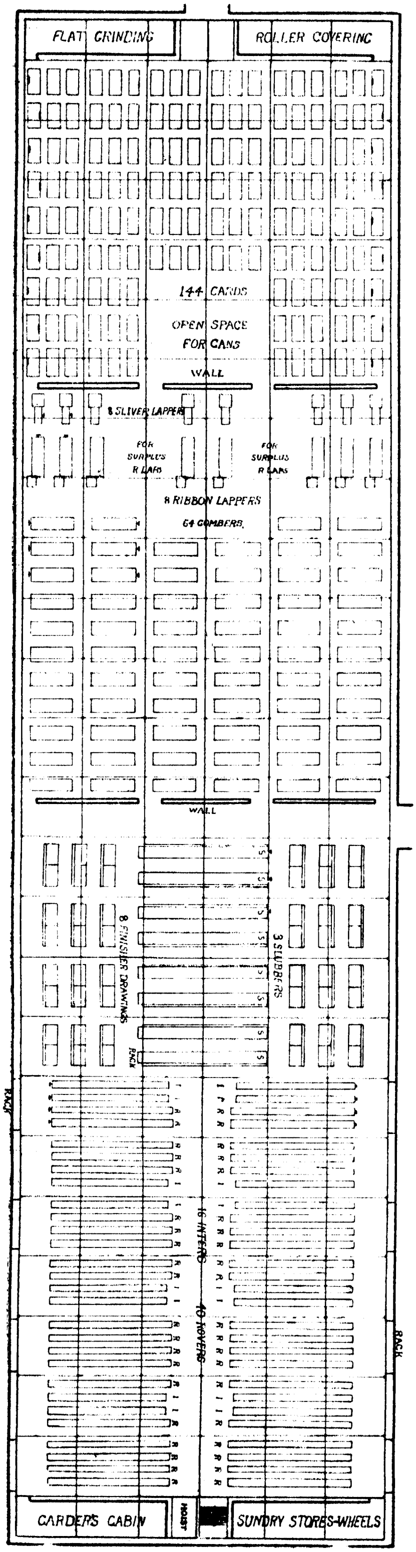
The New Model Nasmith Comber made by Platt Bros. of Oldham, has surpassed all its sister makes, and is particularly recommended where quality-cum-quantity is required. Other outstanding features of this machine are such as all adjustments can be made by standing in front of the machine, good control over waste percentage and quality, improved working of the main engine, and so on.

Drawing Frames

These can be arranged in several ways such as zig-zag, or all three heads in one line or on tandem principle with gearing at one end or in the centre, the last named being more efficient. On account of wider settings, big diameters of rollers—front to back 1½", 1¼", 1½", 1½"—are certainly far more efficient because of better control over fibres and smoother running due to less revs. per min. Whether to adopt electrical stop-motions in favour of mechanical is a matter of one's own private judgment which in my case happens to be in favour of the latter.

Speed Frames

As these machines are to be ordered out for combed cottons, and finer hank rovings, it is to one's own advantage to depart from the usual number of spindles per machine, i.e., 84 per slubber, 120 for inter, and 160 for rover, and go in for units with more spindlage, such as 100 for slubber, 144 for inter and 216 for rover. They reduce the costs of production and outlay. When ordering longer frames, the one question that



Card-room Layout for a Fine Counts (average 80's) Cotton Spinning Mill.

arises, is of their maintenance. Here it can be pointed out that on account of the clean class of combed cotton and finer hank rovings that are put through them, they (machines) remain in a fairly constant state of cleanliness (and, therefore, almost trouble-free) which in itself is a temptation to order out more spindles per unit. Roller diameters should be as big as permissible. Generally speaking, for slubber, 1⅜", 1¼", 1⅜", inter 1¼", 1⅛", 1¼", rover 1¼", 1⅛", 1¼". In some up-to-date methods of construction, the oldish type of skew-gear for spindles and bobbins has given place to helical-gear for noiseless running. How far the latter can be adopted depends on the difference of cost in the two systems. Full bobbin diameter for a slubber should be from 5" to 5½", lift 10", for inter, same as slubber, for rover 3" to 3½" dia. of full bobbin, 7" lift, for all practical purposes.

To make our discussion on this aspect of mill planning more complete, a comprehensive line-sketch of an '8-prep' card-room is given on the opposite page. It consists of 8 slubbers (i.e., 8 preps) and their respective drawing frames arranged to occupy a fairly central position. These are proceeded by 64 combers, 8 ribbon-lappers, 8 sliver-lappers (all enclosed within dustproof walls) and 144 cards, respectively, and succeeded by 16 inters and 40 rovers arranged in the convenient order of 2 inters and their corresponding 5 rovers in two rows as indicated. Total number of roving spindles is 8,160 capable of producing slightly more than 7,800 pounds of 8-hank rovings per day of 11 hours including an hour's recess. Cards, sliver and ribbon lappers and combers will be group driven. Drawing and flyer frames will be driven by individual electric motors with fast and loose pulleys on the machine-shaft.

With reference to the sketch are compiled two tables, one of them giving useful information on speeds, productions, spindlage of fly-frame unit, etc., and the other giving approximate dimensions of the various machines used therein.

TABLE No. I.—*Useful Data* (*with reference to the Sketch*)

					Per day of 11 hours including 1 hour's recess				
Machine	Revs./min. of spindle	S.S. of front roller in ins./min.	Turns per inch	Hank of roving	Production/spindle (after deducting loss due to doffing, etc.)		Production per machine in pounds (actual)	Loss due to doffing and breakages	Card-room production for each section in pounds
					Hanks	Pounds			
Rovers ..	1,200	424.3	2.828	8	7.70	0.963	196.45 (204 sps.)	8%	7,858 40 rovers =8,160 sps.
Inters ..	650	541.2	1.201	2.5	9.66	3.86	501.80 (130 sps.)	10%	8,028 16 inters =2,080 sps.
Slubbers ..	440	687.5	0.640	1	10.37	10.37	10,37.00 (100 sps.)	24%	8,296 8 slubbers =800 sps.
Drawings ..	—	1,650.0	—	0.20	—	—	1,040 (8 dels.) (2 × 4)	20%	8,320 8 F. drawings= 64 F. deliveries
Combers ..	Lap weight = 23 dwt. per yd. Nips per min. = 95 Waste removed = 18% Teeth of lap ratchet taken at every stroke = 4 teeth			0.20	—	—	140 (6 boxes)	5%	8,400 60 combers working 4 stopped for gauging
Cards ..	Lap weight = 11 oz./yard, = .00173 Hk.-lap. Doffer dia. = 27", revs. per. min. = 9			0.18	—	—	77.20	5% (stripping, etc.)	10,500 136 cards working 8 stopped for gauging

TABLE NO. II.—*Machine Particulars* (*with reference to the Layout*)

Machine	(Includes the drive) length × breadth (approximate)	Some particulars
Card	10′-5½″ × 5′-3″	40″ on wire with coilers for cans, 12″ diameter.
Sliver lapper ..	8′-3″ × 5′-½″	Square-back, 9″ lap, 20 cans up.
Ribbon lapper ..	16′-1½″ × 4′-9″	Six boxes, 10½″ lap.
Comber	14′-8″ × 3′-7″	Six boxes.
Drawing	14′-4″ × 4′-10¼″ (with cans)	2 heads of total 8 dels., 15″ staff, gearing in centre.
Slubber	40′-5¼″ × 4′-6″ (with cans)	100 sps., dia. of full bobbin 5½″, 18″ staff, 4 sps. in each box.
Inter	38′-8½″ × 3′-0″	130 sps., dia. of full bobbin 5″, staff 19¾″, 6 sps. in each box.
Rover	43′-4¼″ × 3′-0″	204 sps., dia. of full bobbin 3½″, staff 19″, 8 sps. in each box.

Canada's Trade With British India

Indian Trade Commissioner's Report

THE total Indo-Canadian trade for the year 1943 was valued at $151,666,000, a decrease of $37,564,000 from the all-time high figure of $189,230,000 recorded in 1942. Imports of $17,090,000 from British India during the year were $4,256,000 less than in 1942, while exports of $134,576,000 to British India were $33,308,000 lower. Increased restrictions on exports and imports in both countries together with the scarcity of shipping space available largely contributed to the decrease.

Canada's imports from British India during 1943 only comprised 1.0 per cent. of the total Canadian imports. This was a decrease from 1942, as while the total Canadian imports continued to increase during 1943 the imports from India recorded a decrease. Canadian domestic exports to British India during 1943 accounted for 4.5 per cent. of Canada's total exports during the year. As in the case of the imports, exports to India also showed a decrease, the percentage of the total exports falling from 7.1 per cent. to 4.5. The steady increase in the Indo-Canadian trade, both in imports and exports, that was experienced up to 1942, was broken in 1943.

British India ranked fourth as an exporter of goods to Canada during 1943, being exceeded in this respect by the United States, the United Kingdom and New Zealand. In 1942 India ranked third but during the year Canada's imports from New Zealand increased and that country rose to third position as a supplier of Canadian imports. As an importer of Canadian goods India ranked fourth in 1943, the same position she has held since 1941. The United States, the United Kingdom and Egypt surpassed India as customers for Canadian goods during 1943. In total value of trade for the year India was fourth in order of importance, total Indo-Canadian trade being exceeded by Canada's trade with the United States, the United Kingdom and Egypt. In 1942 India held the same position in Canada's total trade.

Trade Inquiries and Openings

The official controls upon commercial trading that were developed during 1942 by both the Indian and Canadian Governments were extended in some respects and relaxed in others during 1943, but on the whole were not radically changed in character. These controls together with the continuing shortage of shipping space from India made any expansion of import or export trade between India and Canada during the year rather difficult. Imports from India were largely confined to a few essential items while exports from Canada were in the main part war supplies or goods urgently needed for the war effort. There was little movement between the two countries of goods for purely civilian purposes.

These conditions were reflected in the number of trade inquiries received during the year. In the early part of 1943 the inquiries received were comparatively few in number but in the latter part of the year a noticeable increase in the number of inquiries coming into this office was experienced. Allied military successes and some improvement in the shipping situation encouraged commercial trading firms in both countries and they began to inquire about prospects for post-war trade. Many Canadian firms were desirous of making contacts with Indian firms now so that they would be in a position to enter into business relations with them when normal trading conditions return after the war. Other firms, which had been importing Indian products indirectly through the United Kingdom and the United States, wished to deal direct in the post-war period and inquired for assistance in making direct connections.

Second All-India Textile Conference

Inaugurated By Sir Joseph Kay, Kt.

Amid scenes of enthusiasm the Second All-India Textile Conference, organized by the Textile Association (India) with the collaboration of the Victoria Jubilee Technical Institute, Bombay, met on the 27*th and* 28*th February and* 1*st March* 1945, *in a spacious pandal specially erected for the occasion in the compound of the V.J.T. Institute. The Conference was inaugurated by Sir Joseph Kay, Kt., Managing Director of W. H. Brady & Co., Ltd., Bombay, a prominent millowner who was Chairman of the Millowners' Association, Bombay* (1921, 1922 *and* 1935), *and President of the Bombay Chamber of Commerce in* 1926.

Messages wishing the Conference success were received, among others, from Sir Victor Sassoon, Sir H. P. Mody, Sir Sorab Saklatvala, Mr. K. M. D. Thackersey, Mr. M. K. Vellodi, Mr. G. D. Birla and Mr. B. W. Batchelor.

The proceedings began with the singing of Rabindranath Tagore's " Jana Gana Mana," followed by the welcome address of Mr. Nandulal Mehta, B.A., LL.B., Manager of the Morarjee Gokuldas Mill, Bombay, and Chairman of the Reception Committee. Sir Joseph Kay then delivered his brief but comprehensive address which took less than an hour.

The afternoon session on the first day was presided over by the Hon'ble Justice Sir Harsidhbhai Divatia, M.A., LL.B., Kt., President of the Industrial Court, Bombay, and Chairman of the Bombay Textile Labour Inquiry Committee, 1938-40. *The whole of this session was devoted to the reading of papers on labour welfare and labour legislation by Mr. Thomas Edward, Mr. A. S. Banavalikar, Dr. K. V. Joglekar, Mr. Bordawekar and Dr. D. B. Kirtikar, while Mr. R. G. Gokhale, Labour Officer, the Millowners' Association, Bombay, and Mr. J. D. Harrison spoke on the education, health and welfare of the worker as Priority No.* 1.

The third session, which met on the afternoon of the second day, was divided into two sections ; one section on " fibres," presided over by Mr. D. L. Sen, Acting Director of the Indian Central Cotton Committee Technological Laboratory, and another section on problems of " ventilation, humidification and electric drive," presided over by Mr. G. S. Karpur, Chief Engineer, Khatau Mill, Bombay. In the former section, papers on synthetic fibres, utilization of vegetable silk fibres for textile purposes, and the cotton fibre, were read by Mr. G. R. Kelkar, Mr. R. N. Kapur and Mr. C. Nanjundayya, while Mr. A. N. Gulati's paper dealt with the future of Indian textile fibres. In the latter section, Mr. V. A. Ajgaonkar read a paper on the humidification and ventilation of textile mills with special reference to loom sheds, Mr. T. M. Shah read a paper on air-conditioning plants for textile factories, and Mr. R. S. Ponkshe on the electric drive as applied to textile mills.

The last session met on the afternoon of the third day under the presidentship of Seth Ramnath Podar, of Podar Sons Ltd., and Chairman of the Marwari Chamber of Commerce, Bombay, and of the Silk and Art Silk Mills Association, Bombay. This session was devoted to a discussion of the Platt Report and recent trends in textile machinery development. Instructive papers on the implications of the Platt Report for the Indian cotton mill industry and the question of its post-war re-equipment and rehabilitation were read by Mr. B. B. Joshi, L.T.M. (*Hons.*), *A.T.I., Additional Controller of Raw Materials and Stores, Cotton Textiles, Government of India ; Mr. S. D. Oke, Weaving*

Master, New Kaiser-I-Hind Mills, Bombay; Mr. Hughes, General Manager, Shree Ram Mills, Bombay; and Mr. J. Mordecai, General Manager of the Century Spinning and Manufacturing Co., Ltd., Bombay.

An interesting paper was also read on the position of the handloom industry in the post-war world by Mr. M. P. G. Nair, Principal, Institute of Textile Technology, University of Travancore. The series of papers and discussions was rounded off with a most instructive and entertaining talk on "Safety First" in mills and factories, by Mr. A. S. Trollip, B.Sc., C.I.E., General Manager, Bombay Electric Supply and Tramways Co., Ltd., and Joint Honorary Secretary, the Safety First Association of India, Bombay.

The Conference was attended by nearly a thousand delegates from all parts of the country. Its importance was recognized last year when millowners and mill managements up-country deputed their representatives to the Conference on their behalf. Similarly almost every textile manufacturing centre of any importance was represented at the latest Conference, although the top men of the industry in the city of Bombay were unaccountably absent.

The Conference awarded in absentia *its Honorary Fellowship for the year to Dr. Nazir Ahmad, President, Textile Association (India) and Director of the Technological Laboratory, Indian Central Cotton Committee, in appreciation of his services to the study of cotton textile technology; the first Fellowship was awarded last year to the late Mr. Cowasji Dorabji Panday, of the Panday Textile Trust, Bombay.*

It is indicative of the growing popularity of the Textile Association (India) that it has to-day a membership of 1,700 *and that it has already opened branches in Sholapur, Khandesh, Ahmedabad, and Cawnpore. The University of Bombay and the Textile Institute of Manchester sent delegates to the latest Conference organized by the Association. Further, it was asked to depute two of its members to serve on the Committee of Principals of Technical Institutes and it was consulted in the framing of the syllabus for the proposed degree course in textile manufacture. Rules for the award of A.T.A. (Associateship) and F.T.A. (Fellowship) diplomas of the Association have been formulated and it is expected that the first awards will be announced shortly.*

Prize Winners

The following were the winners in the prize essay competition:—

Mr. Sohrab Dinshaw, L.T.M., Assistant in Carding and Spinning, Kohinoor Mills, Bombay, spinning essay, "A Complete Scheme of Organization and Management of a Model Spinning Mill of 20,000 Spindles working equally on 20s, 30s and 40s." (Textile Association Gold Medal.)

Mr. S. H. Tirodkar, Assistant Weaving Master, Shree Ram Mills, Bombay, won a cash prize for Weaving Essay on "A Complete Scheme of Organization and Management for a Weaving Mill of 500 Looms." (Khatau Prize of Rs. 150.)

Mr. K. H. Shah, B.Sc., B.Sc. (Tech.), Research Chemist, Department of Chemical Technology, University of Bombay, submitted the best essay in Dyeing, "Possibilities of Manufacturing Common Dyes from the resources available in India." (Morarji Mills' Gold Medal and a Cash Prize of Rs. 150.)

The following were the winners in the prize design (woven and printed) competition:—

Mr. Shivdutt Rai, Senior III Class student, Government Weaving Institute, Benares, submitted the best design in Weaving, "A Design for a 4″ Saree Border on a 200 Jacquard." (Tata's First Prize of Rs. 100.)

Mr. J. G. Kamat, L.T.M., c/o Finlay Mills, Bombay, won the second prize in Woven Designs, "A Design for a 4″ Saree Border on a 200 Jacquard." (Tata's Prize of Rs. 50.)

Mr. G. K. Shirodkar, Designer, Bombay, submitted the best design in Printing, "A Design of not more than 4 Colours to be printed on Crepe Cloth for Ladies' Dress Fabrics," and thus won the first prize of Rs. 100 (Tata's Prize.)

Miss Jini H. Kohla, student of National School of Arts, Bombay, won the second prize of Rs. 50 in Printed Designs, "A Design of not more than 4 Colours to be Printed on Crepe Cloth for Ladies' Dress Fabrics."

Along with the Conference, an exceptionally well planned and highly instructive exhibition of textile fabrics and processes and of textile machinery accessories was held in the Conference grounds. Prominent mills, chemical manufacturers and machinery agents had opened their own stalls in the exhibition, which served to enlighten and instruct the hundreds of visitors who poured in during the week that it was kept open.

The organizers had made excellent arrangements for the entertainment of the delegates and visitors. Short dramatic pieces in Marathi, Gujerati, Hindi and English were put on the boards on the first evening. On the second evening there was a programme of dances, including a textile ballet and Kathakali *songs and instrumental music, and on the third evening a programme of light and classical music, the technical staff employed in the local mills having taken a very prominent part in the dramatic performances.*

It was again found impossible, however, owing to war-time restrictions and rationing difficulties, to organize social functions in connection with the Conference. The proceedings of all the three days were keenly followed and the standard of the papers and the discussions thereon was uniformly high. It is to be hoped, however, that at least next year the restrictions on paper supply will be relaxed to the extent of making it possible for the organizers to print and circulate in advance copies of the papers to be presented at the Conference, or, at any rate, useful synopses to enable the delegates to come prepared to take an active part in the discussions and deliberations of the Conference.

WELCOME ADDRESS OF Mr. NANDULAL M. MEHTA

FRIENDS AND BROTHER DELEGATES,

During the absence, out of India, of Dr. Nazir Ahmad, the President of the Textile Association (India), as a member of the Mission of Indian Scientists, the duty of welcoming you all to this Second All-India Textile Conference has fallen on me. I consider it a high honour to extend to all of you a most cordial welcome to this second annual gathering of textile technicians from all over the country. Many of you have travelled hundreds of miles from far-flung textile centres of India, at considerable expense and personal inconvenience to yourselves in these days of hardships, and will be travelling back to your respective places of work with equal personal inconvenience. During these days of controls and rationing, it is difficult for the Reception Committee to provide for you even the bare necessities, not to mention amenities and comforts. The Committee has done its best to squeeze out maximum concessions, within the limit of the various controls as interpreted and enforced by the controlling executives. I hope that you will look upon these inconveniences with indulgence and sympathise with us in our short-comings.

As you all know, the First All-India Textile Conference was held in this very ground last year, during the *Holi* holidays, on 9th, 10th and 11th March, under the distinguished presidentships of Sir Victor Sassoon, Bart., Sir Sorab Saklatvala and Mr. Camar S. Tyabji. The unique success of that conference inspired the Textile Association (India) to undertake the responsibility of organizing this second conference after one year. The Reception Committee has the good fortune of securing three distinguished persons to preside over the deliberations of the Conference. Sir Joseph Kay, who has consented to do us the honour of inaugurating the Conference and of opening the Textile Exhibition attached to this conference, is a distinguished industrialist and business man of our city, being the Managing Director of Messrs. W. H. Brady & Co., Ltd., who control three cotton mills in the city and a number of large and small industrial and business concerns. The afternoon session of to-day will be presided over by the Honourable Justice Sir Harshidhbhai V. Divatia, Judge of the High Court of Judicature, Bombay, and President of the Industrial Court. The last day's session will be presided over by Sheth Ramnath Podar, a distinguished industrialist, business man and millowner of our city. The Reception Committee is deeply thankful to these three great men for accepting our invitation to preside over the respective sessions of this conference.

Rise and Growth of the Textile Association (India)

The Textile Association (India), which is principally responsible for this conference, has, during its short existence of only six years, striven its best to acquire and maintain the reputation of being a pioneer and truly representative body of textile technicians all over India. There is hardly a textile centre of any importance in India, which has not got a member of this Association. The phenomenal rise and growth of the Association has proved that it had filled up with vitality, energy and activity, the vacuum that existed between one textile mill and another and between one textile centre and another, so far as the technical staff was concerned. It has linked up its members into a bond of common weal and reciprocity. It has brought among the textile technicians of the country a self-consciousness and a self-evaluation of their importance in the economy of the textile industry and a reorientation of their attitude towards one another.

The ambitions of the Association have been succinctly laid down under the caption 'objects and methods,' in its rules and regulations. Conferences of this type are but a medium providing a platform for the achievement of these manifold objects of the Association. During and after the last conference, suggestions were made that regular subjects committees should be constituted to draft out resolutions to be discussed and voted upon at the Conference. This is not possible under the present constitution of the Conference. If the resolutions adopted at the Conference and the opinions reflected therein are to carry weight and influence, clear and well defined constituencies of the various groups and classes of textile technicians should come into existence, so that their delegates may have a truly representative character. With its present limitations, the Conference must confine itself to deliberations and discussions of the various subjects vitally affecting the textile industry of our country.

Photo: Central, Bombay

Mr. Nandulal M. Mehta, B.A.LLB., Manager, Morarjee Goculdas Mill, Bombay.

After passing the LL.B. examination, Mr. Nandulal Mehta joined the Morarjee Goculdas Mills, Bombay, in July 1918. He was made Assistant Manager in May 1925 and Manager in May 1934. He was a member of the Labour and Technical Advisory (Managers') Sub-Committee of the Millowners' Association, Bombay, from 1936 to 1941 and of the Advisory Committee of the Government Apprentice Scheme from 1937 to 1941. Chairman of the Managing Committee of the Textile Association (India) since its formation in 1939, he was also the President of the Bombay Textile Clerks' Union in 1940 and 1941.

Textile Technician's Position

The position of the textile technician in the industry has been very ill-defined and nebulous and resembles a buffer state, which has to absorb shocks from its two powerful neighbours, viz., capital on his right and labour on his left. But with efflux of time, he has begun to assess, though very slowly, his rights and responsibilities. Next to agriculture, the textile industry is the second largest industry of our country. After very nearly one century of its existence, this class of textile technicians has not been able to assert itself as powerfully as it should in its relations with capital and labour. The present war has put to test the resourcefulness not only of nations but of industries, technicians, labour, etc. When normal conditions are restored in our country, in our industry and in our daily life, we, the textile technicians, should not forget the lessons that we have learnt and the experience that we have gained during the present war. We are a force in the growth of the industries of our country. War-time methods in our textile industry and war-time substitutes of essential materials have opened our eyes to the enormous potentialities of post-war development in various directions, so far as our industry goes. The members of the Textile Association (India) had an opportunity of once discussing, among themselves, at one of their informal monthly meetings, the subject of "War-time stores." The amount of information that came out during the course of the discussions revealed the resourcefulness of our technicians and was a measure of their self-reliance in times of scarcity of essential articles of stores. During war-time, some methods and materials must be used even at the cost of efficiency and quality, in order to avoid a complete break-down and stoppage, but it would be foolish to continue such methods and materials after the return of normal conditions. But this should not blind us to the enormous potentialities of our indigenous resources and their place in the economy of our industrial life. This brings us to the realization of the inadequacy of our equipment in the direction of technical research. It should be the ambition of the Textile Association (India) and conferences of this type to provide the necessary facilities of equipment to the technician to work out, in his own way, the various problems which beset him in his work. He must have free and easy access to a library and a laboratory. It is sad to observe that this city, with a record at its back of about one century of textile industrial development, cannot boast of a single decent library of technical books of study and reference accessible to any technician. Cannot the textile industry afford to establish and maintain one such library worthy of its reputation and the reputation of this city? The absence of a well-maintained library and reading room is a real hardship to us. The Association will soon be in a position to formulate its plan for a library and reading room worthy of its name and it will launch a vigorous drive to put it through and thus meet a crying need of the industry. Similarly, the absence of a laboratory where the textile technologist can carry out his own experiments in various directions on raw materials, stores and sequence of processes is also a great handicap, which requires early attention. Although such facilities are not within the means of this Association to provide in the near future, the Association can arrive at a working arrangement with the Technological Laboratory of the Indian Central Cotton Committee, the Department of Chemical Technology of the University of Bombay and the Victoria Jubilee Technical Institute, by which the members of the Association may be given necessary facilities to carry on their research work in several directions, without payment of the scheduled fees, which the research technologist can ill afford to pay. I understand that some sort of arrangement exists in the United Kingdom, by which capital sums spent by industries on research work are exempted from excess profits tax and are allowed as business expenses. We have no information if our industrialists have pressed for a similar concession on our Government. If they have already done so, the result is not known to the public.*

Invasion of Synthetic Fibres

In post-war development, King Cotton will not be too sure of his throne. Ominous rumblings of the invasion of synthetic fibres in the imperial realms of King Cotton are clearly audible on the distant horizon. Indian weather conditions and the extremely low standard of life of the average Indian will hardly permit extensive replacement of cotton textile fabrics by substitutes of any other kind. But, there will be a variety of fibres and fabrics flowing into India from countries more fortunate in their industrial development and it will be a trying time for the textile technologist to adapt his equipment and his skill for processing the new varieties. If the Indian textile industry receives a fair deal in the post-war period at the hands of the powers-that-be, and if it is not made the dumping ground of the products of other countries or of the

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*The latest budget of the Government of India has made some concessions on this point. (Please see page 368.)—Ed., *I.T.J.*

reparation goods of countries like Japan, the industry has a good future before it. With several serious attempts at raising the standard of living of the Indians in the post-war period, the demand for consumer goods including textiles will be on the increase and the industry will have to expand considerably to meet this growing demand.

Rationalization and New Machinery

This brings us to the burning question of rationalization, new machinery, new processes, and a host of other post-war problems. Being the very first speaker at this conference, I do not consider it fair and proper to discuss at length, in my welcome speech, problems, which form the subject matter of special papers contributed by eminent and experienced technologists of the industry, which will be read and fully discussed at the subsequent sittings of our conference. The Report of the British Cotton Textile Mission to the United States of America led by Sir Frank Platt, and its importance to the Indian cotton textile industry will be discussed by subsequent speakers at this conference. In post-war development, the problems of individual units, in any one industry and of individual industries, will be governed by so many national, ultra-national and international considerations that to-day's pleasant day-dreams of a post-war Utopia in industry may but prove a mirage. Considerations of exchange, currency, freight space, international obligations, etc., will rigidly restrict the choice of the buyers of post-war equipment.

Possibilities of Manufacture in India

I have already referred to war-time substitutes in the textile industry. While some of them will vanish with the return of normal conditions, some will survive. As I have no desire to boost up or advertise the products of any particular factory or factories, I must refrain from mentioning any names. Referring to machinery and component parts, it must be stated to the credit of some pioneers in these lines that their products will stand comparison with well-known imported articles of the same category. The main object of the Textile Exhibition, which our distinguished President will open to-day, is to focus the attention of textile technicians and industrialists on such products, which, with our efforts and goodwill, must find a permanent foothold in post-war economy of the textile industry. I am not far wrong if I venture to state that, barring the most essential component parts of most of our textile machinery, the bulk consists of a variety of castings, etc. Buyers have to pay heavy charges by way of freight, insurance and import duty on such components, which can, with some skill and perseverance, be fabricated in this country. It will be in the interests of our national economy in post-war planning to encourage existing workshops and to establish new ones for building up textile machines and their various components. When plans are being worked out for the manufacture of motor cars, aeroplanes and locomotives in India, the manufacture of textile machines for the textile industry, which, as I have stated before, is the second largest industry in India, only next to agriculture, should not be long delayed. Till arrangements are made for the manufacture of essential components, our industrialists may, under arrangements with textile machinists in other technically advanced countries, import such essential components only. In due course, with the help of skilled experts, either imported or indigenous, the essential component parts can be made locally. It is the duty of the textile technician to accelerate the development of such lines in right directions by unstinted technical advice and it must be the duty of the mill-owner to show wide tolerance, make some small financial sacrifices and give preferential treatment to machines, components and store articles manufactured in our country. Taking into account the enormous sacrifices which the Indian tax-payer has made during the past several years for the protection of the Indian cotton textile industry, this expectation from the industry is not unreasonable.

During the sittings of this conference for three days, various papers on a number of subjects such as synthetic and natural fibres, their processes, humidity, ventilation, air conditioning, scientific management, post-war problems, labour welfare, industrial health, medical service, etc., will be read and discussed from various angles by persons who have grown grey, or will, in course of time, grow grey in the service of the Indian textile industry. These subjects cover almost every aspect of our textile industry. The very idea of textile technicians discussing such subjects as fall beyond the orbit of their technology may be unpalatable to some millowners, but the technicians will be failing in their primary duty to the industry if they shirk their responsibility and avoid discussions on subjects on which both sides can express their views with equal force and vigour. They must cast aside timidity and claim their rightful place in the industry.

The Technician and the Worker

With the growth of political consciousness, labour will assert its rights. It will be the duty of the technicians, who spend the greater portion of their working days with labour than with the millowner, to understand and appreciate the aspirations of labour and guide it on the right path. The technicians will have to make plans for and execute various rationalization schemes in the near future. This must be brought about by the minimum amount of friction, dislocation or upheaval. Such delicate problems will have to be handled with tact and sympathy towards labour. The technicians must help labour to canalize the expression of its views and try to understand its difficulties. I hope much will be said on these points during our discussions at this conference. To obtain optimum efficiency and production per man and machine, certain minimum standards of working conditions will have to be laid down. It will be the duty of the technical and administrative staff to see that these standards are scrupulously maintained.

Scheme of Competency Certificates for Workers

Although, general and technical education for the mill employees are subjects of separate papers to be read and discussed here, I venture to make a passing reference to one or two important aspects thereof. It is the duty of the Textile Association (India) and our conference to undertake the administration of a scheme of awarding competency certificates to the technical labour employed in the industry. I do not refer to the Fellowship and Associateship Diplomas of the Textile Association (India), the arrangements for awarding which have been completed; the awards will shortly be announced. I refer to the lower grade technical staff and operatives. Without the slightest disturbance to the existing arrangement, we can introduce minimum standards of general education and technical knowledge which aspirants for higher posts in the labour force must achieve. To put it in a nutshell, an ordinary operative, such as a sider or a weaver, should not be promoted to a jobber's post unless he has passed the prescribed test of general education and technical knowledge. The Textile Association (India), with the co-operation of employers' associations in various centres, must lay down a syllabus of the tests required for competency certificates of various occupations in the textile industry and, with the active help of its members, hold such tests and award certificates. The members can go a step further and insist upon recruiting or promoting to higher posts, only such operatives as possess competency certificates of the Textile Association (India). No special classes or institutes will be necessary for such education and training. Aspirants for such competency certificates may be given special opportunities for acquiring practical training in their own department during the usual course of their work. A small beginning must be made, say, in Bombay, the largest textile centre of India and, in its preliminary stage, it may be restricted to a limited number of occupations. Afterwards, it may be extended to embrace as many occupations as possible. In due course, this will raise the general level of education, skill and efficiency of the entire labour force. With no capital outlay of any kind but with the goodwill of employers and with the active co-operation of textile technicians, this scheme, of which I have given the barest outline, will prove of immense benefit to the whole textile industry.

Once again, I welcome you one and all to the Second All-India Textile Conference and to you, Sir Joseph, for sparing your valuable time and giving us the pleasure and benefit of your guidance. I hope that with the generous co-operation of you all the programme of our conference will be carried out with success.

SIR JOSEPH KAY'S INAUGURAL ADDRESS

MR. CHAIRMAN AND GENTLEMEN,

Thank you for paying me the compliment of asking me to preside at the opening of this, the second All-India Textile Conference, and on behalf of the Chairman and Committee of the Association I extend to all delegates a warm welcome, and a special one to those of you who have travelled from other places to take part in the three days of technical and social activities which have been so well arranged by your Committee. I feel sure that at the end of the Conference you will find your time has not been spent in vain.

I have listened, Mr. Honorary Secretary, to your report with considerable interest, and have also been looking through the most recent reports of the Association, and must congratulate the Managing Committee on the remarkable progress which has been made, and which is a clear indication that you of the technical side of cotton spinning and weaving realize what an important part you are to play in the future of the industry, and an institution such as yours, in the light of your collective experience, must be the mouthpiece of what is, and what is not, essential on the technical side for the successful progress of the cotton textile industry, which is of such major importance to the welfare of this country. I wish you continued success.

Photo: Hamilton Studios, Bombay

SIR JOSEPH A. KAY, KT.

You will not, I know, expect me to address you on matters of a highly executive and technical nature, for your programme of discussions and debates has been so arranged as to open up avenues of debates and the exchange of views which must result to your mutual benefit. Let me now, therefore, turn to a few general observations which touch on some of the problems of the day as I see them.

Future of the Industry

We have sure grounds for being optimistic about the future of the industry. The position is obvious, I think, for in the next few years at any rate we are not likely to suffer from external competition and the consequent price-cutting from without. We know, too, that our mills, with a certain number working on double-shift—combined with handloom production—can meet the increasing domestic requirements of the country without producing and selling at unremunerative rates; if we assume, as we must, some extension of the industry, we then have export markets within our reach.

We know that following the curtailment of world-wide production during the war, the world is short of cloth and yarn and that stocks are negligible; so we can assume with some justification that our mills are likely to be running at full capacity for some time to come. But let that optimism be tempered with caution: new fabrics are being introduced; the demands and requirements of the people change; labour legislation and social security schemes will come into being, and may be—though I hope not—price control and price fixing by Government will be continued for some time. **I see no reason—though up to a point we receive a measure of protection—why Government, once the war is over, should interfere with the normal course of trade in the textile industry. Inflation and black-marketing will pass once the**

war's demands cease, and the reasonable competition which is sure to exist again will be such as will ensure the consumer getting his requirements of cloth at proper prices. In the cotton textile industry such a thing as Government versus private enterprise should not arise.

Machinery and Plant

Naturally after the last years of the war effort, when our machinery has had to pay the toll of constant day and night running, our minds must turn to the replacement of worn-out plant, for metals like human beings, must pay the penalty of passing years, and the time comes when the running of machinery is of little or no avail. There is much that needs replacement in the Indian mills, for following the long depression in the textile industry, little or no money was spent, or could be spent, on the replacement and upkeep of machinery for many years. But times have changed, and if we are to hold our own against such competition as we might experience in the years ahead of us, let us at once commence to " put our house in order." But let there be no wild and theoretical planning, as is the fashion of the day, but well-thought-out schemes to replace worn-out machinery by that embodying up-to-date principles; and no indiscriminate extensions without taking into consideration the cost involved. **Remember that spinning machinery will cost you on to-day's prices 100 to 110 per cent. on pre-war values; weaving machinery 70 to 75 per cent.; preparatory machinery 75 to 80 per cent.; bleaching and finishing machinery 75 to 85 per cent., and so on. I suggest, therefore, that when formulating your plans you should take into consideration what you expect to earn in normal times on your capital outlay, otherwise trouble may be ahead of you.** I do not profess to know what course the prices of new plant are likely to take, but I can, with such knowledge as I possess, calculate that it will be difficult for an entirely new mill, built in any of our present manufacturing centres, on to-day's value of land, buildings and machinery, to compete in the years to come with our well-managed existing mills, which are steadily spending money as it is made on the improvement and replacement of worn-out plant. And let this be done on modern lines with a definite end in view, and do not overlook the fact that much research is being done in textile machinery of all kinds, and methods of process might see great changes before many years are over. I am not suggesting for one moment that orders should not be placed now for such machinery as may be required, provided reasonable delivery can be obtained, but I do advocate a policy of reasonable precaution. I deprecate the purchasing of second-hand machinery, such as has been suggested in certain quarters, for, in my view, in that direction retrogression lies.

Labour

Our labour is, and must be, one of the most important problems connected with the development of the cotton textile industry in this country, and it is essential that every effort should be made to secure more understanding relations between master and man; otherwise never-ending troubles will arise and result in losses to both sides. Much has been done in recent years: better conditions of work; the settlement of disputes by arbitration; limitation of hours of work; holidays, and so on, are now in force, but there are still many " gaps " to be filled, and though we have now, I think, an established labour force, there is still something lacking in what is expected of an employee on the one hand, and the responsibilities of the employers on the other. I hope the much talked of Government legislation, as a result of industrial conferences, will not be forced on the industry without due regard to the conditions which prevail in this country. Progress has been made in recent years in regard to the settling of disputes by arbitration, but there is still much to be done, and though further legislation may be necessary, it should be so framed as to permit, in so far as is possible, the mills and workers settling their own differences. The difficulty, of course, is that you have on the one hand the Millowners' Association, which is very sympathetic to labour, whilst on the other you have no really responsible body which can speak for labour, as up to this time the labour movement, such as it is, has come from " without " rather than from " within " the labour force. **Labour must be made**

to realize that if it is to play a more important part in the industry, then it must respond to the benefits which will arise from all the schemes to be introduced for it-- merely more money and less work will not just do !

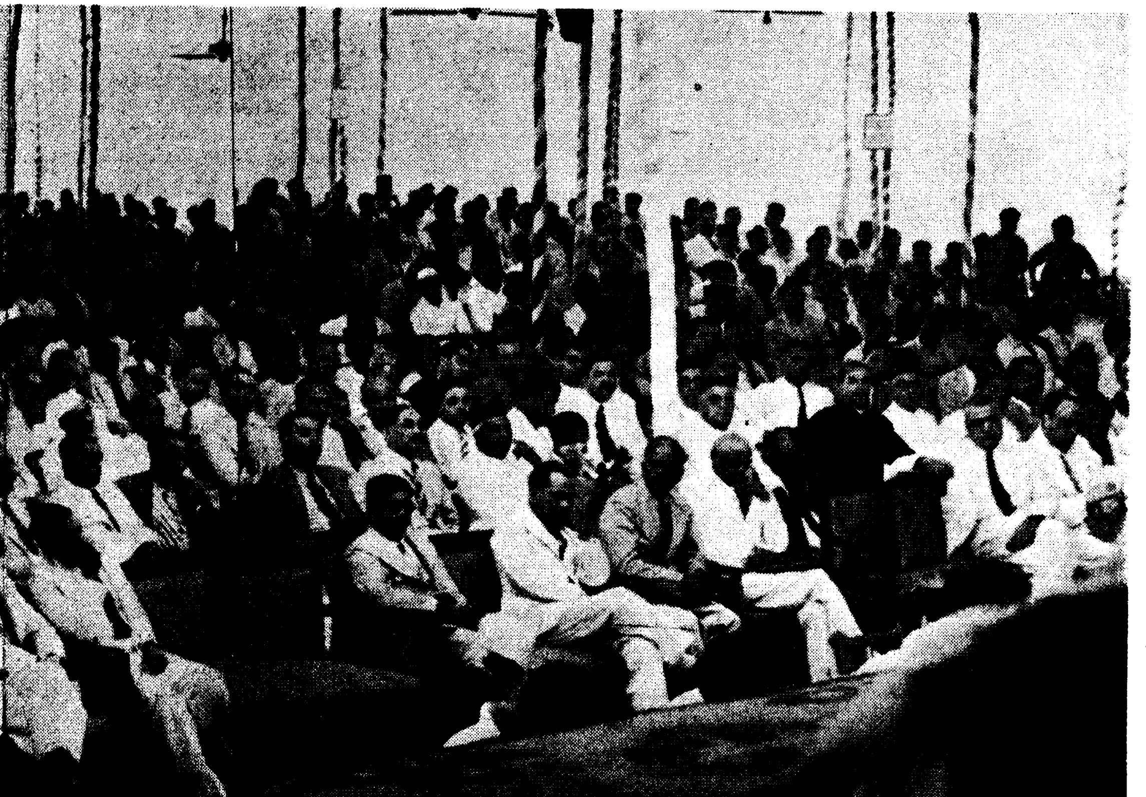
Making-up and Marketing

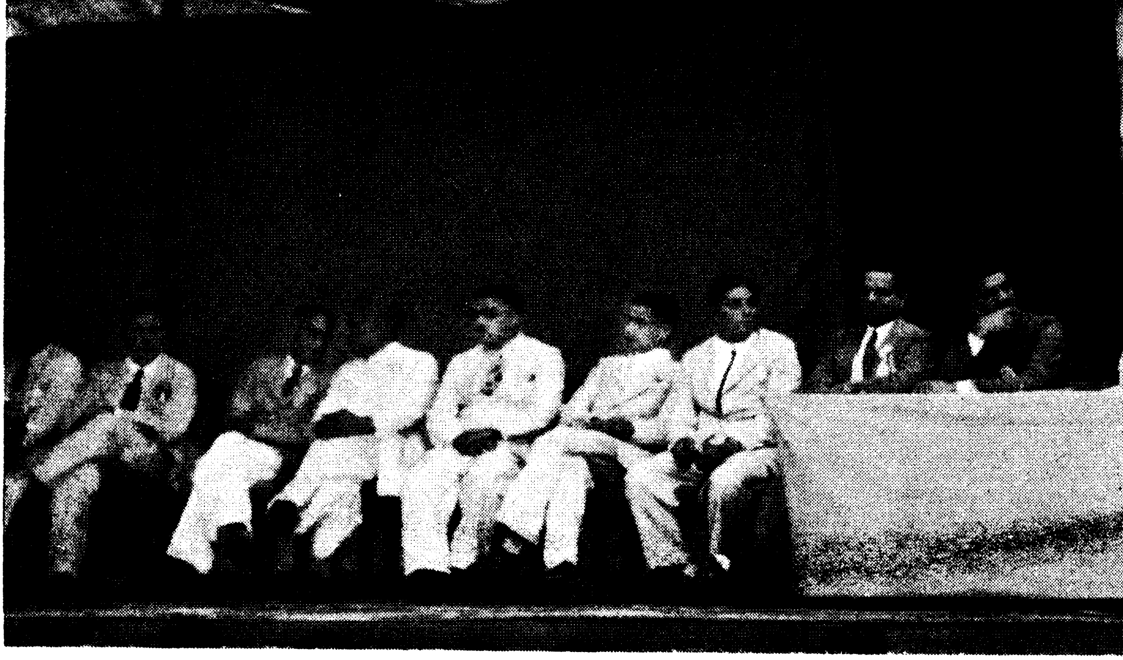
These two matters are very much overlooked, and though the marketing of goods is perhaps outside your province, I do suggest to you that more attention should be paid to the making up of your production to ensure that it reaches the consumer in proper and attractive shape. I know only too well how the technical experts watch their production and efficiency figures, will examine their cloth in the folding department and their yarn in the bundling department, and I know, too, that few ask themselves how that same cloth and yarn will appear to the buyer after it has been baled and either carted or shipped to the consuming markets. I had a case in one of my own mills a few years ago, when I saw in the Calcutta market a bundle of our own *dhotis* after the trials of a sea voyage to Calcutta, which on opening up, owing to careless bundling and packing, compared very unfavourably with a bundle of Japanese *dhotis* which had come all the way from Japan, and I well understand why the Japanese found favour with the buyer, who after all is the man you are finally catering for and is the best judge of your product. The customer is always right !

The Platt Report

Of the many " White Papers " issued in England in recent times on matters relating to industry, none has raised so much interest and criticism as the Platt Report on the Cotton Textile Mission to the United States of America, and it can certainly be termed the " best seller " in so far as the cotton textile industry is concerned. It has been reviewed and discussed here too, but there has been, and still is, some misunderstanding as to its purport owing to there not being a clear appreciation of the terms of reference. As

to the **Conference**





Sir Joseph Kay

I see it, the Mission was to investigate and report on the methods used in the cotton industry in the U.S.A. with a view to making suitable adjustments of the methods used in England, in order to increase production without further calls on labour, and so ensure supplies of cotton goods to meet the essential needs. As you know, the methods followed were:—

(*a*) to compare the productivity of labour in both countries;

(*b*) to account for any differences between the two;

(*c*) to compare production methods of typical American and British mills;

(*d*) to make recommendations for the increase of labour productivity in British mills.

Now obviously, production per man per hour (now known as P.M.H.) was linked up with the type, size, location and condition of plant, and that is why the Mission had to lay so much stress on certain types of machinery in the spinning section, and automatic looms and high speed winders and warpers in the weaving section, otherwise they could not have proved that with normal staffing British P.M.H. (calculated on the basis of total output and total labour force) is less than the American by approximately 18 to 49 per cent. in spinning, by 80 to 85 per cent. in winding, by 79 to 89 per cent. in beaming, and by 56 to 67 per cent. in weaving. And also with normal staffing the British labour requirements exceed the American by approximately 22 to 98 per cent. in spinning, by 387 to 571 per cent. in winding, by 366 to 786 per cent. in beaming, and by 129 to 203 per cent. in weaving. And naturally, this brought certain conclusions for improvement in P.M.H. in Britain, the chief of which were:—

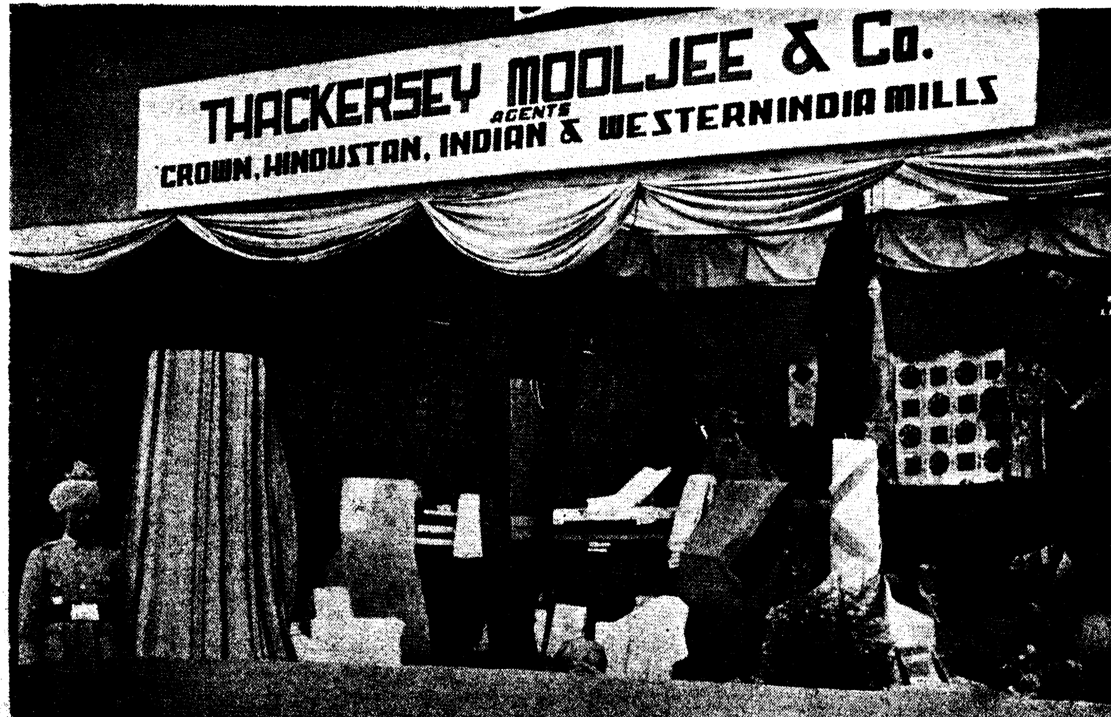
(*a*) improvement in the technique of spinning,

(*b*) a greater number of looms per weaver, relying upon the machine to do the work rather than the man.

A great deal of technical data was submitted to justify these and other conclusions, which of course cannot be included in this brief survey, but to which I commend your careful study.

Naturally, Lancashire was disturbed by these observations and anticipated that there was some undisclosed motive to revolutionize the weaving section of their industry, and they naturally asked where

Sir Joseph Kay opening the Exhibition



A view of the crowd at the Exhibition

was the capital to come from to install new plant; and where were they to sell their mass production, as after all they were dependent on the demands of the many and varied markets for which they catered. And not only that, Lancashire with its long experience of the cotton trade, its force of highly skilled and trained labour, and its knowledge of the world markets, resented any suggestion that it should change from a policy which had stood it in such good stead for so many years, namely: "Quality, not quantity."

Lessons from Platt Report

But let us not be too concerned over that: what we have to do is to extract from this investigation such knowledge as will benefit us in our own industry in the future, **and there is in the Platt Report much which will enable us to turn our minds to improvements in the course of our manufacture and in the running of our own mills. The Indian domestic markets will in the near future tend to be so large as to justify our taking more seriously than we have done in the past "mass production," for I am convinced that up to this time, like Lancashire, we have been making too many sorts of cloth in our mills, which in the natural order of things tends towards a decreased all-round efficiency and a lower output.** The pros and cons of automatic *versus* Lancashire looms you will discuss at length, and you will find, I think, that one system is beneficial. for one kind of production, and the other for an entirely different line of manufacture, but there is no doubt that the automatic loom eliminates the "human element" which, owing to labour's lack of appreciation of the science of weaving, produces so many faults in the cloth we manufacture in this country under present-day conditions.

Research and Technical Education

Much has been said about research, and much is now being done in the growing of better cotton and in the scientific handling of it from the raw product to the manufactured article through processes which after all have not seen any revolutionary changes in the last 30 or 40 years. But those days are passing, and as I see it we must encourage and develop institutes where scientists can investigate and solve problems which will help towards better and more efficient courses of manufacture. That is long-term policy, but surely there is a short-term policy too, and that is, every concern should have its miniature research station where problems peculiar to itself can be investigated and solved. I could mention lots of these, but as you know we try to get over these difficulties in a practical way rather than by seeking scientific knowledge.

Technical knowledge and the seeking of it must be encouraged if we are to keep abreast of the changing times. Fundamentally, compulsory primary education of our workers, which would enable them to realize that more efficient work would mean more pay and a better standard of living, would help to solve some of our difficulties, but naturally it cannot stop at that, for spinning and weaving is a science, and those who are to play their part in the various processes through which cotton must pass before it becomes a usable article, must apply their mind and knowledge to the scientific methods which in the passing of years have been evolved; and further, must study methods which might improve or revolutionize those processes. That can only be done by study and training, and therefore the V.J.T. Institute, the Matunga Laboratories and the Technological Departments of our Universities should be encouraged and developed, for in these enlightened days science as applied to industry is more essential than ever.

And now, gentlemen, I must close. As I said at the outset, my remarks must perforce be general, though there is much I would like to comment upon. You of the Textile Association who play a part in the executive administration of large works and great number of workers, must realize that on your shoulders rests some responsibility for the success of the undertaking with which you are associated. **Be sympathetic with your labour and try to train it to realize its responsibilities too—apply your scientific knowledge practically—benefit from your own and other people's mistakes—move with the changing times and aim at producing cloth which can be bought and appreciated by the millions of this country, at a price within their means.**

AWARD OF HONORARY MEMBERSHIP OF THE TEXTILE ASSOCIATION (INDIA) TO DR. NAZIR AHMAD

SPEECH BY Mr. B. M. BORKAR, Spinning Superintendent, Phœnix and Bradbury Mills, Bombay

DR. NAZIR AHMAD, O.B.E., M.Sc., Ph.D., F.Inst.P.

It is my pleasant duty to announce before the Second All-India Textile Conference that the organizing body of the Conference, the Textile Association (India), on 11th January 1945, unanimously elected Dr. Nazir Ahmad, O.B.E., M.Sc., Ph.D., Cambridge, Fellow of the Institute of Physics, as its second Honorary Member. This is an honour for which only one person is eligible during any one year, the first Honorary Member being the late Mr. Cowasji D. Panday, Founder and Managing Trustee of the Panday Textile Trust. In electing Dr. Nazir Ahmad as its second Honorary Member the Textile Association seeks to pay homage to research work in cotton textile technology which is playing and will continue to play a very important part towards further progress and development in the premier industry of India.

After graduating from the University of Allahabad, Dr. Nazir Ahmad proceeded to England for higher studies in Physics and worked for four years under the late Lord Rutherford and was awarded the M.Sc. in 1923 and Ph.D. in 1925. On return from England he was appointed Head of the Science Department, Islamia College, Lahore. He took keen interest in the affairs of the Punjab University and in 1929 was appointed a member of the Punjab Provincial Research Council.

In 1930 Dr. Nazir Ahmad came over to Bombay as Assistant Director of the Indian Central Cotton Committee's Technological Laboratory. In 1931 he became the Director and continues to hold this position ever since. Under his guidance the activities of the Laboratory have expanded in every direction. A full-fledged Testing House, where all kinds of tests on cotton yarns and fabrics are made, has come into existence and these tests have been recognized by the Government of India and by the various millowners' associations. A new ginning section for studying the methods for improving ginning of Indian cottons has been added and extensions have been made in the yarn and spinning sections. It is gratifying to note that some very complicated and delicate apparatus has been evolved in the Laboratory as a result of experiments undertaken at the instance of Dr. Nazir Ahmad and these new instruments have helped in getting correct readings and thus collating very valuable data.

Numerous other investigations into the spinning properties of various cottons, pure as well as in mixture, have been made at the Laboratory and valuable bulletins have been published about high drafting and the utility and efficiency of processing machinery in spinning mills. Dr. Nazir Ahmad is the author of more than 50 technical bulletins or scientific papers embodying the result of these investigations.

Dr. Nazir Ahmad has also taken keen interest in educational and technical matters. He is a Fellow of the University of Bombay, a member of the Board of Management of the Victoria Jubilee Technical Institute and a member of the Board of Visitors of the Department of Chemical Technology. He is also a member of the Advisory Board of the Imperial Council of Agricultural Research and of the Lac Cess Committee and a member of the Council of Scientific and Industrial Research.

During the last three years, he has been a very active President of the Textile Association (India) and was mainly responsible for the annual prize competitions and for the successful organization of the First All-India Textile Conference.

Recently Dr. Nazir Ahmad was selected to be a member of the mission of Indian scientists which was deputed by the Government of India to visit Britain and U.S.A. to observe and report on the latest developments in all departments of pure and applied science. We expect that the observations and the recommendations of this mission will help Indian industry to mobilize all its resources for post-war expansion.

By electing Dr. Nazir Ahmad as an Honorary Member, the Textile Association (India) shows its appreciation of the necessity of harnessing the researches in science to the development of the staple industry of India. Dr. Nazir Ahmad is yet in the prime of life and we all wish him a long and active life for furthering the cause of cotton research to which he has devoted the major portion of his career.

We all miss Dr. Nazir Ahmad at to-day's conference. In his inevitable absence, due to his being detained in Europe for work in connection with the mission of Indian scientists, we have to rest content with conferring the Honorary Membership of the Textile Association on him *in absentia*.*

Vote of Thanks by Mr. D. B. Katrak L.T.M.

You have just heard the instructive speech given by Sir Joseph Kay. There are many important points worth noting and I am sure we make use of the same whenever possible. On behalf of you all I thank Sir Joseph Kay for sparing his valuable time and taking all this trouble for us. When I was young, my father always used to tell me that whenever you want to get any important work done, always approach a busy man, and you are sure that your work will be done efficiently and diligently. Well, that actually happened when we saw Sir Joseph Kay; though so busy, he agreed to inaugurate the Second All-India Textile Conference and Exhibition.

THE HON'BLE JUSTICE SIR HARSIDHBHAI DIVATIA'S ADDRESS

GENTLEMEN,

I have listened with much interest as well as profit to various papers that have been read before us to-day and the general discussion that followed thereon. As you are aware, I am not connected with this industry except as regards the relation between workers and employers. From what I have seen and come to know about this industry on this point, I think this question has to be approached from a double aspect. The twofold aspect from which this question has to be viewed is this: firstly, it must be recognized by all those who are concerned with this industry that the textile industry has remained till now, and will remain in future for a long time, the *National Industry of India*. It has established itself as such at present, and even though in the near future we are bound to have industrialization on a large scale, I believe the textile industry will remain the principal national industry for a long time to come. And, as it is a national industry, it is necessary for all the limbs that form part of the textile organism—I prefer to use the word organism instead of industry—to be well looked after. Just as the health of every body depends upon the healthy activities of its limbs, it is the health or the well-being of each limb of the industry that affects the other components of the industry.

The second standpoint from which this question has to be reviewed is this: India is one of the poorest countries in the world. There are millions in India who cannot even afford to buy the necessary quota of cloth which are required to cover their bodies and the members of their family and it is, therefore, necessary that the question of consumers of cloth of this industry must be kept in the forefront in any discussion regarding the inter-relation of the several elements that form the textile industry. In other words, as a national industry it has not simply to provide cheap cloth for the people of India, but it has got to increase production of different kinds of cloth for consumption in India and abroad. So, what we really want is not only increased production, but also cheaper production for the

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* Dr. Nazir Ahmad has since returned.

The Honourable Justice
Sir Harsidhbhai Divatia, M.A., LL.B., Kt.

people of India. It is that aim which the employers as well as workers have to keep in mind. Then we come to the subject of the wages of the workers and the various welfare measures which are required for them. Finally, for disputes about wages and conditions of work, we require legislation and Industrial Courts.

One thing we must always keep in mind is that employers as well as workers are trustees for the large mass of the public which forms the consumers of cloth in India. The consumers, meaning the public, are represented by the State, i.e., the Government of the country. It is, therefore, necessary that the Government as representing the public and the class of consumers as a whole must so regulate the industry that it must, with all its component parts, work harmoniously for the benefit not only of the industry, but also of the country.

At one time it was thought by employers and industrialists that in order to work a concern successfully and prosperously, it was necessary to have cheap capital and cheap labour. It has, however, come to be recognized now that cheap labour, which really means inefficient labour, is dear in the long run. What is really required, therefore, is not cheap but efficient labour and it is from that standpoint that we have to approach the various measures for the welfare of workers. We can obtain efficient labour by making our workers educated, healthy and contented. These are the three words in which I can summarize all the welfare measures which can be embodied in legislation relating to the workers.

All-India Legislation Wanted

So far as India is concerned, you are aware, and several speakers have laid stress upon it, that there are different provincial enactments for that purpose. What we, however, require is an all-India legislation concerning the relations between employers and workers in the textile industry. That legislation should, in my opinion, apply not merely to textile concerns in British India but should also apply to all textile concerns in India, including the Native States, because, as most of you are aware, the conditions in Native States and the conditions in British India act and react upon each other and there should be a uniform policy for all units in the Indian textile industry. In my work in the Textile Labour Inquiry Committee I was impressed with the genuine grievance of the employers that they cannot compete with the mills in the neighbouring Native States where wages were low and workers' welfare measures were practically non-existent. The result was that the cost of production in our mills was much more than the cost of production there. I therefore lay stress on the necessity of not merely a British India, but an all-India, legislation in matters which should regulate the relations between employers and workers.

Arbitration—Compulsory or Voluntary?

One thing which has come for discussion to-day is the question of arbitration. One of the members of the Conference has raised an important question as to whether arbitration should be compulsory or voluntary and a reply has already been given by one of the speakers, that in order that arbitration should work to the satisfaction of both sides, it must predominantly remain voluntary. No doubt there may be extraordinarily critical times when the interest of society itself would require that the troubles between the employers and the workers, if they do not agree, should be solved by the public in the interest of the State. You know the time when there was a general strike of railways in England in 1926. When this strike was there, the public co-operated with the Government in order to put down the strike which was considered to be without justification. Now, in such cases if the Government and the public think that the employers and the workers would not come to terms with one another, and that if it is protracted it is bound to prove ruinous to the public, it is, I think, the duty of the State to interfere and provide compulsory arbitration in such cases. You know that in the Bombay Industrial Disputes Act, although the general provision is that the arbitration must be voluntary, it has been found necessary on extraordinary occasions to have compulsory arbitration, but very great care should be exercised before forcing any sort of compulsory arbitration upon the parties, and that should be regarded as the last stage.

Extract from Message of
Sir H. P. Mody, K.B.E., Bombay.

"*The subjects for discussion are important and complex, and while they may provoke a variety of views, their ventilation in public can do nothing but good. Those in control of industry in India cannot afford to be insensitive to the tendencies of the age, and must not fail to acquire a progressively enlightened outlook in matters of labour welfare and labour legislation. Suitable working conditions and efficiency of management are also matters of vital importance to industry. . . .*"

I do not desire to speak at length on the various welfare measures which have been referred to to-day. We have dealt with them sufficiently and I believe exhaustively, in the Report of the Textile Labour Inquiry Committee, in which all these questions have been dealt with. I do not think I can add usefully to anything that has been said. I will, however, refer to one or two aspects of the question that have been agitated to-day, and one was the question of wages on the one hand and welfare measures on the other. One of the speakers, I believe, said: What is the use of referring to welfare measures before first of all regulating wages? There is, no doubt, a good deal of truth in this criticism. You must first of all give the worker a living wage, i.e., a wage on which a family of four can live, whatever that amount may be in a particular Province or State. One thing is certain, that it is the duty of the employers first to give such wage to the workers as would be regarded as a sufficient living wage and it is thereafter that measures for social welfare should be taken.

"Outsiders" in Labour Unions

Now, there is one more question, and that is the very important question in connection with the disputes between employers and employees. As you are aware, in all questions of dispute between the employers on the one hand and the workers on the other, the parties are not evenly and equally matched. In some places, employers are highly organized; they have got their own associations, they have got their legal advisers, and so on. The workers, as you are aware, are not sufficiently organized and generally they have not among themselves a person who can guide them in their disputes, with the result that for some time to come at least, outsiders will have to take part and help the workers, but I hope that the day may come soon when the leaders of the workers and of the trade unions, would arise from the workers themselves, so that no outsiders or interested parties can exploit the workers as against their employers. It is necessary, therefore, to educate workers themselves to help them. It is the duty of the employers to help

Extract from Message of
Mr. Ambalal Sarabhai, Ahmedabad.

"*There is a lot that remains to be done in respect of labour welfare and efficient management. But the problems of our country are different from those of others and taking for a model a country like England, which is mainly industrial, will not suit Indian requirements and conditions. Labour being cheap so far, little attention has been paid in rationalization of work. Other countries are far in advance in this respect and so also in conditions of work and housing. I do hope that the consideration of these and other important subjects by your Conference will be helpful. . . .*"

them in forming trade unions. If that is done, some sympathy and goodwill is bound to be created between employers and workers. In this connection, a reference was made by one of the speakers to a scheme which has been adopted in the Delhi Cloth Mills. About four months ago, I had an opportunity to visit Delhi and to see the various welfare activities that were being pursued in that mill. I have read the scheme in connection with the Trust, of which something has been said. I do not know the inner working of the Trust, but I am sure that if the provisions of that Trust are being carried out I think it is a great scheme which employers not merely in textile industries, but in other industries might very well copy. (Cheers.) I was told, also I read in the memorandum of agreement, one thing which seems to be quite exceptional, that is, that one of the workers was made a member of the Board of Directors. (hear, Hear.) In this respect this concern has certainly gone a great way in giving an example to employers in India. I was told that for some time past there was no strike in the Delhi Cloth Mills. I am not saying that this is the only mill which has done something genuine for the workers. I have visited almost all the mills in the Bombay Presidency, and I have found that the employers themselves are very anxious that their workers should be efficient and in order to make them efficient they have tried to provide various welfare measures. I do not entirely blame the employers if they have not carried out all that is necessary, because in some cases, when there have been upheavals in the industry, it is very difficult to spare money for certain necessary measures. You know all employers are not of one type but I believe that the employers generally recognize the necessity of running the industry in a smooth and efficient manner by reducing the grievances of the workers. Legislative measures to protect the employers as well as the workers will always remain necessary, but much depends upon the employers and workers themselves to make such measures successful.

I was much impressed with one of the papers read to-day, i.e., by Dr. Joglekar. I endorse what he has said, because I have seen myself all those things when I visited the mills in the Bombay City. In fact, there was no organization for medical relief and I hope that the paper that he has read before you to-day will be given effect to by all the employers of the industry.

One of the speakers has rightly observed that legislation, industrial and labour legislation, must not be for the benefit of one party, but it must be for the benefit of all the parties or all the persons concerned. I entirely endorse it. There is a belief, at least in some quarters, that legislation is only for the welfare of the workers and it is also believed in some quarters that even Arbitration Courts are inclined more towards labour than towards employers. Speaking personally, gentlemen, I can say that so far as our Industrial Court is concerned, we have always kept before us the ideal of the welfare of the industry as a whole in deciding all disputes. Employers as well as workers must receive a fair deal from the workers, but our main aim has been to enforce upon courts which must have before their minds the welfare of the industry as a whole. (Cheers.) As I said before, not only is production to be increased, but the cost of production is to be cut down and the employers as well as the workers should fully co-operate in the manufacture of more as well as cheaper cloth not only for the benefit of themselves, but for the benefit of consumers also. Therefore, it is the duty of the employer to do all that he can for the satisfaction and welfare measures of the workers. It is equally the duty of the workers to be as efficient as they can when they are paid properly and when their needs are looked after by Government. In my experience, if the average Indian worker is properly trained and treated, he will not be less efficient than an average worker in the West, making allowance, of course, for the difference in climatic conditions.

Although a number of industries may be newly introduced in our country after this war, the textile industry will remain predominant. But, the competition between the Indian textile industry and the textile industries of foreign countries is also bound to increase in course of time, and it is necessary that all those who take interest in the welfare of our textile industry should contribute not only for the preservation but also for the progress of that industry.

ADDRESS BY SHETH RAMNATH A. PODAR

SHETH RAMNATH A. PODAR

MR. NANDULAL MEHTA, LADIES AND GENTLEMEN,—It is a fact that the fag end of a three days' conference is no occasion for any oration, let alone my own disinclination; nevertheless, the tendency to be loquacious on the particular occasion, when the curtain is about to come down on the last scene of the great war, is irresistible for me, as it may be for any one of you. I shall, however, be careful and shall not allow my enthusiasm for speech-making to overstep the bounds of the real necessities of the case.

First of all, I must congratulate the organizers of the conference, for not only do these conferences serve to focus attention on matters of immediate importance to the industry, but also afford an open forum for technical men of long and varied experience to come forward and state their views on these matters. The conference which is now concluding its session will go down in the annals of the Association as an epoch-making event in the sense that, more than any other conference which may have preceded it or may follow it in future years, it discussed and formulated views on the post-war reconstruction of the industry, and I have no doubt that at the appropriate time the views you have expressed here will receive proper consideration at the hands of those who will be responsible for the ultimate realization of our post-war plans.

Our preoccupations should not be allowed to divert our attention from the real needs of the industry. No doubt the conference has indicated the broad directions in which future progress lies, but I think the stage has been reached when all those whose livelihood depends upon the industry, irrespective of their status, should say less and do more.

I was disappointed to a very great extent at the absence from the conference of the top men of the industry in the city and their lieutenants, but I am very pleased to note that representatives of mills in up-country centres, regardless of all the inconvenience provided by our national railways, have taken the trouble to be here in large numbers. Let me hope that in the conferences to come the organizers will have the pleasure of meeting here not only the mill executives and technical assistants, but also mill agents and financiers.

Post-war Programme

I would now classify our post-war programme under the following broad heads:—

(a) Reorganization and re-equipment of the industry.

(b) Establishment of an industry for the manufacture of mill machinery and spares in India.

(c) Establishment of an industry for the manufacture of mill stores, including dyes, in India.

(d) Establishment of trade and technical schools which would form a reserve from which mills could draw their requirements of labour and supervisory staff.

(e) Establishment of a central research institution on the lines of the Shirley Institute for promoting research in all branches of the industry.

On paper, the whole thing appears to be very much outside practical politics for us, but it is my humble view that with the necessary financial and moral support from all parties, a beginning can be made and the objectives obtained within a fairly reasonable number of years.

Problem of Re-equipment

Under every one of the above heads, there is a great deal of work to be done by technical men, such as members of your Association. Your Association should, however, first take up the question of re-organization and re-equipment of the industry. I must here digress a bit. The new provisions for depreciation for building, plant and machinery which the Finance Member has announced to-day as part of his budget proposals are, indeed, to say the least, intriguing. Placed as we are in utter dependence of foreign imports for all our equipment, one is entitled to question the wisdom of such wholesale renovation as the Government are probably anxious to accelerate at this period of war. I am second to none in my enthusiasm and anxiety to have for our country's industries nothing but the most modern equipment, but are we to understand that ours is the only country to be producing war requirements and other countries have no concern with war and have enough time to produce our capital requirements? I am afraid if the Grady Report had not been shelved we may not have had to face such a situation as is obviously developing in regard to the equipment of our industries in the post-war period. How can we be sure that, for the capital requirements of our country in the shape of machinery and tools, we could safely depend upon foreign manufacturers who are no less torn than we are by war-time conditions and whose stocks and quality of raw materials must be as limited as elsewhere? We see no doubt their anxiety to switch over their war-time factories to the production of other types of goods for the purpose of regaining their hold on foreign markets, but surely with a little forethought we could have provided ourselves against this contingency and even now, gentlemen, I think it is not too late to apply our minds seriously to the production of goods needed for the re-equipment of our industry. I hope, gentlemen, you, whose main concern is looking after the equipment of the industry, will give serious thought to this question, viz., that in re-equipping the industry there is an all-round improvement in the country's economic condition.

Challenge of Synthetic Fibres

I do not think anybody can quarrel with the above objectives, but what is wanted is a blue-print, clearly explaining how and in what stages these objectives are to be attained, and the industry is entitled to look upon members of your organization to give a proper lead. In welcoming the delegates to the conference, Mr. Nandulal, if I remember correctly, expressed grave doubts as to whether King Cotton will continue to hold his sway in the textile industry of the future. Though I am not as diffident as Mr. Nandulal appears to be, yet I can foresee a serious challenge coming from synthetic materials which we can no longer ignore, as it is inextricably bound up with the question of price at which we can finally market our goods. In India, however, we have a duty to the grower of cotton and I do not, therefore, think that we can in this particular sphere go so far as those countries who are not themselves growers of cotton. It is, therefore, my earnest desire that you, gentlemen, should resolve yourselves into sub-committees or study groups, each group undertaking the responsibility for the formulation of definite plans so that when the time comes, these plans may be given due consideration and sufficient weight by those who would be ultimately responsible for the post-war rehabilitation of the industry.

Extract from Message of
Mr. M. K. Vellodi, C.I.E., I.C.S.,
Textile Commissioner, Bombay.

"*The pioneers of this industry had to tread a very difficult and uphill path against severe competition from countries outside India and that it has in the teeth of such competition been brought to its present eminence is a standing monument to the perseverance, the untiring efforts and of the integrity of these pioneers of the industry. We have still among us some of these veterans like Sir Ness Wadia, who continue to exercise a paternal care over its fortunes and whose example the rest of the industry would do well to follow. The war has brought in its train various problems, the most important of which appear to me to be the rehabilitation and the expansion of the industry during the post-war period. Conferences of the type that is being held under your auspices will contribute, I trust, very largely to assist in affording solutions to these problems. . . .*"

Labour's Responsibility

I have learnt with considerable interest of the discussion which took place at the conference on labour problems. The Millowners' Association, of whose Committee I am a member, has already taken an active lead in this matter. I should concede at once that there may still be some room for improvement, but the Association has committed itself to a policy of fair deal to labour. I must at the same time desire it to be known that it cannot always be a one-way traffic only. Labour, as an essential part of the industrial organization, must realize its own responsibilities and co-operate with the employers in all reasonable measures, having as their objective the rehabilitation and reorganization of the industry to meet the post-war world competition, and you, gentlemen, who rub shoulders with our labour force every day would, I am certain, be able to give us valuable advice as to how this happy state of affairs can be brought about.

> **Extract from Message of**
> **Sir Sorab Saklatvala, Kt., Bombay.**
>
> *"I have no doubt the Conference will have the benefit of the views of technical men on the recommendations of the U.K. Textile Mission which visited the United States of America last year and their applicability to the Indian Industry. Labour problems will, I am sure, also form the subject of discussion. We have hitherto not paid sufficient attention to labour welfare from psychological point of view and the subject requires careful study. I think a recommendation might be made to other provinces to initiate labour legislation on the lines of the Bombay Industrial Trade Disputes Act unless the Central Government enact similar legislation on an all-India basis. . . ."*

Future of the Industry

Gentlemen, one or two matters more, and I shall have finished. Various authoritative pronouncements have already been made about the future of the industry. I grant that a great deal depends upon the continuation of the present controls, an integral part of which is the fixation of prices for our cotton goods. You will, however, agree that **for some years at any rate after the termination of the war, supply of cotton goods will not be able to keep up with the demand, and in this view of the case, some sort of control on an international basis both in regard to distribution and prices should continue in the interests of humanity. India has a place among the nations of the world and consistent with the industry's responsibility to Indian nationals, I think we should be prepared to render all possible contribution to any world scheme for the supply of clothing to humanity at large. This transitional period will necessitate continuance of production at the present high, or even higher levels, coupled if necessary with a lower rate of capital realization on humanitarian grounds. This sacrifice is well worth making, in the interests of humanity at large, but at the same time I want you to realize that we must prepare ourselves for the day when India will be called upon to compete in its home and export markets against strenuous competition from other textile producing countries in the world.** I naturally hate to believe that this competition will drive us back to the depression through which we passed in the pre-war period, but I sincerely feel that with the experience which you have gained it will be possible for us to steer clear of the troublous years through which the industry passed after the last war.

> **Extract from Message of**
> **Mr. K. M. D. Thackersey, Bombay.**
>
> *"If our industry is to exist in the post-war period as an economic and efficient unit, holding its own against foreign competition both in India and abroad, then the time has arrived when we must take note of the extent to which preparations are being made by other competitors, both prospective and otherwise, and also make our own plans. The Report of the Platt Committee which was recently published calls for a complete and thorough revision of our ideas as regards industrial efficiency and I sincerely hope that these and other cognate matters will receive the most careful and exhaustive examination at the Conference. . . ."*

In conclusion, let me once again thank the organizers of the Conference for the honour they have done me in inviting me to accept the chairmanship of the conference in its concluding session. Let me also wish the Textile Association and its members prosperity in future. Let the organization grow from strength to strength until it comprises all the technicians employed in the entire Indian cotton mill industry. Your collective wisdom and practical experience would then be a great asset to the industry to which we all have the honour to belong. I face the future with a feeling of optimism, for apart from other things, it is my honest conviction that the salvation of the Indian textile industry can be chalked out and attained by local talents without the aid of imported brains. It should, indeed, be a shame for any country if it has to depend upon foreign technical skill for such a large industry as ours which was established more than a hundred years ago. I am sure you will all tackle this problem most seriously and give to the industry its entire technical personnel with nothing but the most up-to-date modern ideas.

Before I sit down, I must pay a personal tribute to Mr. Nandulal, Mr. Katrak, Mr. Ullal, Mr. Vaidya and their band of workers for the care with which they have arranged the details of the conference and the exhibition, and the success which the Textile Association has met with during the comparatively short period of its existence is, I can say, in no small measure due to your personal efforts.

SPEECH OF Mr. G. S. KAPUR, L.M.E. (Hons.), L.E.E. (Hons.) Eng.

GENTLEMEN,

Mr. Ajgaonkar gave you a detailed description of humidification and Mr. Shah gave you a description about what certain humidification plants can do. Well, as somebody said, the engineer does not know anything of humidification. To a great extent he is right and I think the sections who want to use humidification are responsible for the Engineering Department being indifferent towards humidification. More often it happens like this : certain sections want a particular type of humidifying plant. It must be discussed and and ought to be discussed with the engineer and the pros and cons of it should be studied before ordering out a plant. The sectional heads or the sectional officers order out the plant and dump it on the engineer to work it for good or bad. While ordering they say that the suppliers know what they are supplying. But, the suppliers never care to cater for the maintenance and for the proper working of the plant. That has been my bitter experience. Another thing is, I think many of our mills have grown and not planned. Many of our mills have started as small units and then gone on adding and adding. The plant that you may have got for a certain unit may not be sufficient when you expand. The departmental heads say that they have supplied the plant and ask the the engineer to work it. Therefore, when you order out a machine it is better to order a humidification plant also.

While humidifying a shed the sectional heads are only concerned mostly with what they want for the machine. If the Engineer wants to change over the air margin they will say, 'Oh, you admit extra air, it spoils my humidification ; so don't take in extra air.' That means they expect the engineer to do the churning of it and not the changing over of the air.

Technicians turned actors

The first thing that you will find generally when you go into a weaving shed is that people who are not accustomed to the atmosphere of the shed will say 'Oh, what an atmosphere! What have the departmental heads done to remove the odours? It is most injurious to the people'.

About the variation of the humidification, I think that while ordering out a plant, taking into consideration that the mill is not going to ossify but to expand, it would be right to order out a humidification plant and air circulation plant. It would be better to order out a 200 per cent. size plant in the beginning. The employers do not want to spend on humidification as the Engineering Department is not a money-producing section. Odour should be removed first and then the air-conditioning plant installed as it will make a lot of comfort to the workers.

As regards humidification, there are two or three systems working, overhead and underground. One of them will supply about somewhere between the roof and the ground level. But we want a combination of these if you want a perfect plant. While putting the underground plant, they put in a few ducts and say they have done it. Of course, the caterers say, 'You put the plant: it will be all right'. That is not sufficient. You must do something more. Instead of a few ducts, the whole floor of the weaving shed should be a net- work of ducts. It is a suggestion I am making. In a large shed the caterers put some ducts at one end and they expect a uniform humidification to the other end of the shed. I find it does not work. What they will have to do is to use a sort of feeder system extra. The tunnels should open at particular places in the interior of the shed and from them it should radiate modified air. Before doing anything a series of readings should be taken, preferably by automatic recorders in

Extract from Message of
Mr. G. D. Birla, Calcutta.

"*How to improve the efficiency of the industry and also of the workers, what improvements there should be in labour legislation, what is the duty of the employers and the State towards labour welfare work, are all important questions which I am glad to note you are going to discuss and I hope that the deliberations of your conference will be a source of enlightenment to the employers and employees. . . .*"

Extract from Message of
Mr. B. W. Batchelor, Madras.

"*I hope that the Conference will arrive at conclusions on subjects which will find application and acceptance throughout British India and Indian States and that it will be generally recognized throughout the cotton textile industry that if post-war conditions are to be at a socially desirable level, common aims and a common policy on an all-India basis, and particularly on these subjects are necessary for the industry's sound and healthy development. . . .*"

different sections of the same shed for a year at least. So, humidification is not a point which can be settled offhand in a few days or months. It is to be properly designed and carried out. It is a very wide subject which cannot be tackled in a few hours or months. Enough data should be collected from the users of the plant about the difficulties, maintenance, etc. and patiently sorted out. The Association, I think, will be quite willing to spend some money on printing all these detailed data. Certainly the work will be taken up by the Association, but all of you should not forget that you are the Association and that you have to do it. It is very easy to criticise, but very difficult to do a thing. Unless every one of you do the work of collecting the data, it will be very difficult for the management.

Speech of Mr. D. L. SEN, M.Sc. Tech. (Manc.), M.Sc. (Bom.), A.I.I.Sc., F.I.C.

FRIENDS,

We had a very interesting time. We thought people are not interested in fibres. But, now, after all these four papers, everybody has taken keen interest, and I am sorry, Mr. Richardson (who was to read the fifth paper), although he had come to Bombay, could not bring his original papers and he could not be present.

Mr. Nanjundayya in his paper has given us a very vivid picture about the growth and structure of the cotton fibre. I can assure you there will not be much competition from synthetic fibres. We are not yet familiar with all the chemicals in the processing of this fibre. But, as Mr. Borker said, if we succeed in producing synthetic fibres in an appreciable quantity we can reduce our cotton acreage and use our fields for growing foodstuffs which are so badly required. Food is our first concern. So I think the Indian Central Cotton Committee and the Government of India are moving in the right direction when they endeavour to manufacture synthetic fibres. As Mr. Gulati suggested, there is a good market for synthetic fibres and in my opinion, there is no harm in promoting and developing the fibre industry. There is no need to have any apprehension regarding the safety of cotton. We have such a large supply of cotton and at times we find it difficult to dispose of all our cotton. Sometime back the Indian Central Cotton Committee were actually carrying on experiments to find ways and means to utilize the extra cotton. It was in Alexandria that I first saw cotton fabrics being used in making roads. After putting several layers of cotton fabrics, they are tarred, and it seems once roads are prepared like this there is no necessity for any repair, and accordingly our Technological Laboratories is experimenting on this, and has actually prepared a road in Matunga. It was nearly four years ago, and no repairs have been yet made. We have to make use of these methods in order to utilize our short-staple cotton. In our laboratory we are making a survey of the raw materials from which synthetic fibres could be had. It has been found that lots of raw materials which hitherto had been utilised only for making wood-pulp are quite good for manufacturing synthetic fibres.

Mr. "Friends"?

The most popular figure at the Conference—an expert photographer, amateur comedian, former spinning master, now labour officer—everyone is looking forward to meeting him again next year.

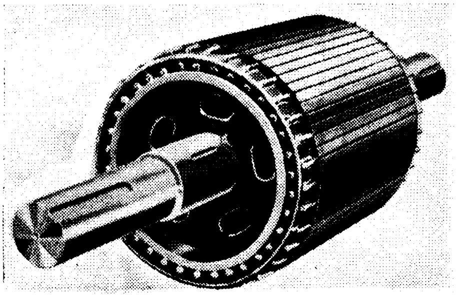
All pictures of the Conference and the Exhibition have been taken specially for the "Indian Textile Journal" by the well-known photographers MESSRS. DEVARE & CO., *Cutch Castle, (opp. Royal Opera House), Sandhurst Bridge, Bombay.*

Newman Electric Motors

A Totally Enclosed British Motor Notable for Compact and Robust Design

A LAYMAN looking through the catalogue of an average electric motor manufacturer is amazed and mystified by the number of different types of motors offered. Open-end bracket, protected, screen-protected, drip-proof, pipe ventilated and totally enclosed are shown with little, if any, guidance as to where and when these different types can or should be employed.

Even an engineer, before he can choose with certainty the most suitable type, must have full knowledge of the conditions in which the motor will be required to operate. Frequently, however, he may be called upon to supply a motor without precise information as to the operating conditions, the exact cycle of duties and the maintenance, if any, that will be given to the machine.



This Double Cage Rotor is fitted on all Newman Type D Electric Motors from 5 h.p. at 480 r.p.m. to 25 h.p. at 1,460 r.p.m. giving slip ring performance with squirrel cage simplicity and reliability.

Life-long experience of such problems, therefore, prompted the designers of Newman motors (proprietors: Newman Industries Ltd., Yate, Bristol, England,) to develop a single type which would be suitable for almost any application irrespective of the working conditions.

Exhaustive research and experimental work resulted in a final choice of a totally enclosed fan cooled design and a new factory was erected at Yate, Bristol, early in 1938, equipped with the most modern precision machinery specially chosen with a view to the most efficient production of this one type.

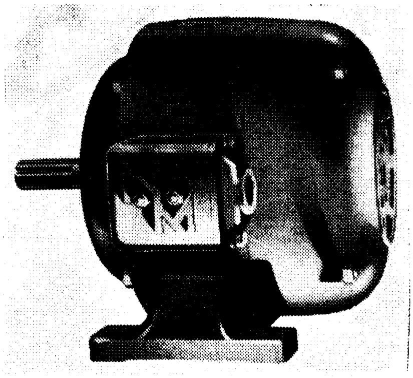
By concentrating on this one type within a range limited to the outputs in most frequent demand, it is produced at a price which compares favourably with older and more vulnerable designs, and the success of this policy is reflected in the continual expansion of the original plant.

Only the finest quality materials are used in the manufacture of Newman motors and these, fashioned to a careful but almost revolutionary design, have made available a motor no larger than the ordinary protected machines, but with windings and bearings completely enclosed, and having technical characteristics well above the average.

Newman motors can safely be installed in dusty, damp or chemically laden atmospheres. They can be mounted on any part of a machine close up to the work, thus saving floor space, eliminating belting and reducing transmission losses.

Their performance is such that they can frequently be used in place of "high torque" motors, whilst the exceptionally high power factor and efficiency, especially on partial loads, will usually effect a considerable saving in current consumption. All type D motors, ranging from 5 h.p. at 480 r.p.m. to 25 h.p. at 1,460 r.p.m. are fitted with double cage rotors as standard, giving performance equivalent to that of the more bulky and complicated slip ring motors with the simplicity and reliability inherent in all squirrel cage motors and star delta starters.

Reliability and economy characterize the performance of Newman motors throughout the range. No desirable quality has been overstressed to the detriment of others, but all are well balanced to ensure long trouble-free service with a minimum of maintenance even under the most difficult conditions.



Modern and compact design of Newman Totally Enclosed for Cooled Motor.

Newman motors are represented in Bombay by **M. H. Dinshaw & Co., 47, Apollo Street, Fort, Bombay,** and in Calcutta and Madras by **the East Asiatic Co. (India), Ltd., 28, Dalhousie Square, West Calcutta, and Mercantile Bank Building, 1st Line Beach, Madras.**

The wrestlers, who participated in the bouts, with Sir Victor Sassoon, Bart., in the centre.

Fifth Annual Inter-mills Wrestling Tournament, 1945

THE Millowners' Association, Bombay, has been organizing an annual All-India Inter-Mills Wrestling Tournament for cotton mill workers since the year 1941. The finals of the Fifth Annual Inter-Mill Wrestling Tournament were held on Sunday, 11th February 1945, on St. Xavier's College Gymkhana Grounds. Over 180 competitors participated this year in the wrestling events on behalf of cotton mills in Bombay and up-country. During the first three years, there were only four classes and four championship shields in the Wrestling Tournament. Last year, an additional class, viz., the fifth class, was introduced, and this year, two additional classes, viz., sixth and seventh, were introduced. The classification, according to weights, is shown below:—

Class 1	..	Not exceeding	seven stones.
,, 2	..	,, ,,	eight stones.
,, 3	..	,, ,,	nine stones.
,, 4	..	,, ,,	ten stones.
,, 5	..	,, ,,	eleven stones.
,, 6	..	,, ,,	twelve stones.
,, 7	..	Exceeding twelve	stones.

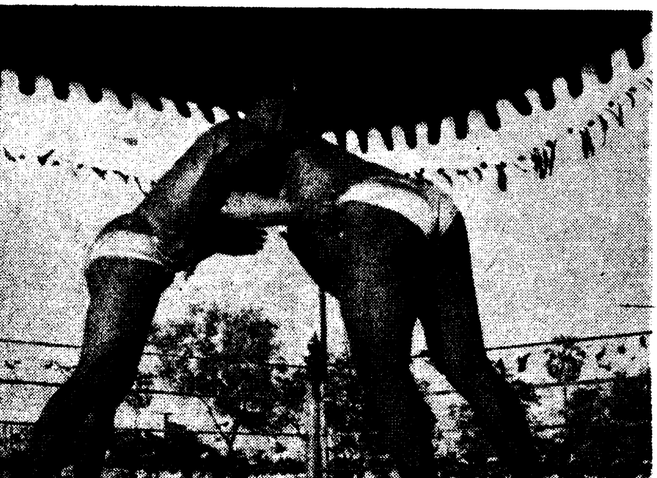
Cash prizes of the value of Rs. 200 and Rs. 100 were awarded to each of the champions and runners-up respectively in all the seven classes.

The Association has provided rolling trophies for each class in the shape of large silver shields. The mill to which the champion of each class belongs is also awarded a silver replica of the shield.

In addition to wrestling, several sporting events like long jump, high jump, 100 yards flat race, and half a mile flat race were also included in the tournament, as was done last year. This year, 126 workers participated in the sporting events as against 120 last year. Two more new events were introduced this year, viz., volley ball and tug-of-war. Seventeen mills participated in the tug-of-war matches while sixteen mills competed for championship in the volley-ball matches. A sum of Rs. 15 was awarded to every player in the teams which won the tug-of-war and volley-ball tournaments, and a prize of Rs. 10 was given to every runner-up.

The eliminating bouts in the wrestling tournament were started simultaneously at four different centres—David Mills, Morarjee Goculdas Mills, Khatau Mills and the Century Mills—on the 22nd January 1945. The semi-finals were held at the Morarjee Goculdas Mills on the 30th and 31st January 1945. The volley-ball matches were played on the 4th, 5th, and 6th February 1945 at the Dawn Mills while the tug-of-war was held on these days in the evenings on the playground of the King George English School, Dadar. Competitions in the other sporting items were held in the mornings of the 7th, 8th and 9th February 1945 at the St. Xavier's College Gymkhana Grounds when the final match in the tug-of-war was also held.

The programme of the wrestling finals began exactly at 5 p.m. on Sunday the 11th February 1945, at the St. Xavier's College Gymkhana Grounds, on the arrival of Sir Victor Sassoon, Bart., who was invited to preside over the occasion. It was a holiday for all mills in Bombay on account of *Mahashivratri*, and large crowds of mill operatives and others interested in the tournament started



The "Heavyweights" in action—Left 174 lbs. vs. Right, 192 lbs.

Siddappa of the Gokak Mills (left) and Tukaram of the Gold Mohur Mills (right).

Sir Victor Sassoon, giving away the prizes to Tukaram Nanasaheb, Champion Wrestler.

pouring into the grounds much in advance of the appointed time as there is no doubt that wrestling is still a popular sport with the cotton mill workers in Bombay. There were also several distinguished spectators who had come in response to invitations. Immediately on the arrival of Sir Victor Sassoon, the wrestlers were introduced to him and a group photograph was taken. The wrestlers looked living specimens of exuberant health and vivacity and their shining skins and enviable contours were eloquent testimony to the care they had taken to keep themselves in fighting trim even after a day's toil for their daily bread.

The first event was an exhibition bout between Nana Tukaram of the Edward Textile Mills and Shankar Dnyanoo of the Sassoon Spinning and Weaving Mills. Then began the fight for Class I championship between Ramchandra Baburao of the Sholapur Spinning and Weaving Mills and Mahadeo Narayan of the David Mills. Though both of them demonstrated considerable skill, Ramchandra Baburao emerged victorious. The bouts in Classes III, IV, V and VII proved very interesting. Sitaram Bhagoji of the Podar Mills defeated Bhagwan Eknath of the Sholapur Spinning in Class III. The fight in Class IV, in which Ambadas Maruti of the Sassoon and Alliance Silk Mills opposed Laxman Maruti of Modern Mills No. 2, proved very exciting. As the first round of ten minutes proved inconclusive, they fought extra time when Laxman Maruti, who was the champion last year, made short work of Ambadas Maruti. The referees paid a glowing tribute to the skill displayed by Ambadas Maruti. Namdeo Bayaji of the Svadeshi Mills completed his hat-trick this year by defeating Shampyar Bhagan of the Kamala Mills in Class V. Namdeo Bayaji has been the champion in his class since 1943. The fight in Class VII between Sidhappa Bharma of the Gokak Mills, who was the champion for the last two years in his class, and Tukaram Nanasaheb of the Gold Mohur Mills, was probably the most important and interesting event in the programme of that day. Sidhappa Bharma, who had already established his reputation as an unbeatable wrestler by defeating his opponents in the last two years, had this year to fight an opponent who had also made his name as a champion wrestler. It was very hazardous to speculate as to who would win the bout. As they entered the arena amidst cheers, all eyes were centred on them. Sidhappa tried his best to bring about the down fall of his opponent who, however, proved to be more than a match for the former. Sidhappa had the mortification of being beaten by a superior opponent in Tukaram Nanasaheb. The champion was loudly cheered, and in addition to the prizes given by the Association, several spectators gave personal prizes to Tukaram.

The panel of referees which comprised such brilliant people like Prof. Kale of the Samarth Vyayam Mandir, Dadar, and Abasaheb Jog of Baroda, paid a tribute to the skill displayed by the wrestlers that day and were of the opinion that the wrestling was decidedly of a very high order.

After the finals, cash prizes, silver replicas and shields were awarded to the champions and cash prizes were awarded to the winners in other sporting events by Sir Victor Sassoon. After a short speech by the President, the Chairman of the Wrestling Tournament Sub-Committee Mr. Nandulal Mehta, thanked him in suitable words. On the conclusion of the function, enthusiastic supporters of the champions took them and their shields in procession to their respective mills.

The results of the various events are given below:—

WRESTLING

Class		*Mill.*
I. Ramchandra Baburao	..	Sholapur Spg. & Wvg.
II. Babu Govind	..	Gold Mohur.
III. Sitaram Bhagoji	..	Podar.
IV. Laxman Maruti.	..	Modern No. 2.
V. Namdeo Bayaji.	..	Svadeshi.
VI. Bhawoo Rawoo.	..	Khatau.
VII. Tukaram Nanasaheb.	..	Gold Mohur.

Winners of the Tug-of-war Tournament: The Swadeshi Mills team, Kurla. Mr. Sahni, Labour Officer, Swadeshi Mills, is standing at the extreme left.

SPORTING EVENTS	*Winners.*
(1) Tug-of-war ..	The Svadeshi Mills.
(2) Volley-ball	The Dawn Mills.
(3) High Jump—	
i. Almeida(5′-5″)	India United Mill No.5
ii. Sogawekar ..	India United Mill No.1
iii. Samuel ..	Meyer Mills.
(4) Long Jump—	
i. Almeida (18′-10½″) ..	India United Mill No.5
ii. Max Miranda	Sassoon & Alliance Silk Mills.
iii. Dharam Dev.	Delhi Cloth Mills.
(5) Hundred Yds. Flat Race—	
i. Dharam Dev (10.9 sec.) ..	Delhi Cloth Mills.
ii. Gangaram Bhujang ..	Svadeshi Mills.
iii. Samson ..	India United Mill No.5
(6) Half Mile Flat Race—	
i. Dharam Dev (2 m.10 sec.)	Delhi Cloth Mills.
ii. Walters ..	India United Mill No.5
iii. Polly Brass ..	Kohinoor Mills.

"Shashtyabda Poorthi" of Trichur Millowner

Cochin Dewan Unveils Portrait

THE Directors, staff and operatives and the constituents of the Sitaram Mills Ltd., Trichur, and the Managing Agents, Messrs. T. R. Anantharama Iyer and Bros., Ltd., Trichur, celebrated the "Shashtyabda Poorthi (sixtieth birthday) of Mr. T. S. Balarama Iyer, B.A., Managing Director, on Wednesday, 10th January 1945, in the mill premises. The function was presided over by Sir G. T. Boag, K.C.I.E., C.S.I., Dewan of Cochin.

Mr. T. S. Balarama Iyer was profusely garlanded and taken in procession from his bungalow to the mills, where there was a big gathering awaiting his arrival. In his characteristic manner, being a staunch devotee of Sri Sitaram, he directed his car first to the Sitaramaswami temple in the nearby village for worship, before proceeding to the mill premises where the Directors and the elite of the town gave him a warm reception. On the arrival of Sir G. T. Boag, the Dewan, light refreshments were served to the guests and the function commenced with welcome songs by the girl employees.

On account of the great popularity of Mr. Balarama Iyer, it was a huge gathering of distinguished personages of the locality, officials and non-officials, and commercial magnates from all parts of the Cochin State and the presidency of Madras. The gathering included the faithful operatives and staff also.

Mr. P. D. Asher, leading cotton merchant of Tirupur and one of the directors of the mills,

Photograph of the Winners and Runners-up who took part in the Mill Sports on the occasion of the "Shashtyabda Poorthi" celebration of Mr T. S. Balarama Iyer, B.A., Managing Director, Sitaram Mills (who is seated in the centre).

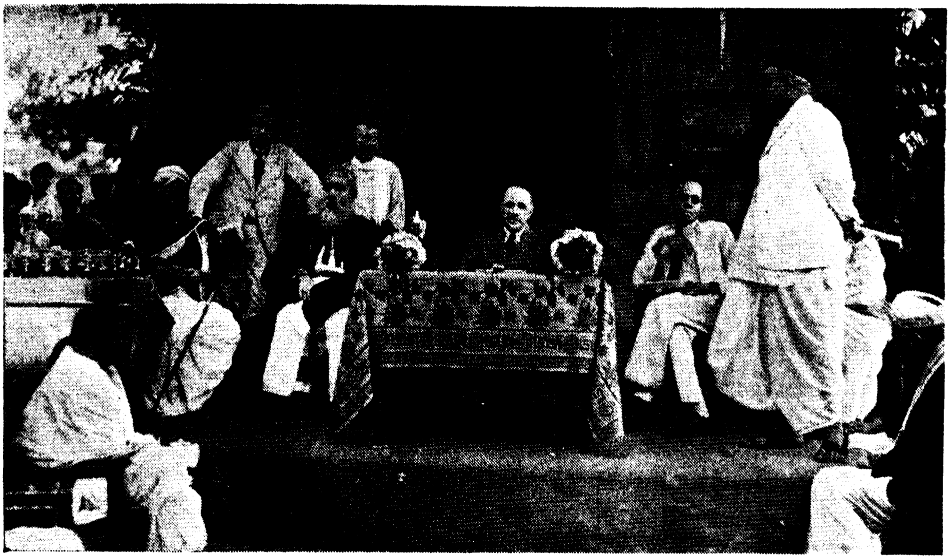


Photo taken on the occasion

Sitting on the dais from left to right:—Mr. T. S. Balarama Iyer, Managing Director; His Grace the Bishop of Trichur; The Dewan of Cochin, Sir G. T. Boag, K.C.I.E., C.S.I.; Dr. R. M. Alagappa Chettiar, Ph.D., Proprietor, the Alagappa Textiles, Pudukad, Trichur; Mr. C. S. Sankara Menon, Chairman, Board of Mill Directors.

Standing on the right and delivering address is Seth P. D. Asher, Proprietor, Asher Textiles, Tirupur, one of the Directors of the Mills.

Sitting on the bottom right with turban is Shree T. K. Kodandarama Iyer, the Manager and Agent of the Mills.

delivered a welcome address on behalf of the mills. Prizes were distributed to the winners in the mill sports.

Addresses were then read on behalf of the directors, the constituents, and the members of the staff and operatives of the mills and the managing agents felicitating Mr. Balarama Iyer on the happy occasion and paying him glorious tributes for his qualities of head and heart, for the services rendered by him to the country in his various public activities and for the establishment of the Sitaram Mills in Trichur. Under the inspiring guidance of his uncle, the late Dewan Bahadur T. R. Ramachandra Iyer, the leader of the Madras Bar, Mr. Balarama Iyer started the mill with only five handlooms in a cadjan shed 35 years ago and gradually, by careful and economical management, it was developed through various vicissitudes to the present Sitaram Spinning and Weaving Mills Ltd., Trichur, with 416 looms and 15,372 spindles, fully equipped with a *pucca* workshop and foundry and dyeing, bleaching and finishing plants. About 2,000 families of the city are dependent upon the mills. On behalf of the operatives, staff and the constituents, the Dewan was requested to present him with a Diamond Jubilee Souvenir, which had been specially prepared for the occasion.

In commemoration of the "Shastyabda Poorthi" celebration, Mr. C. Sankara Menon, President of the Board of Directors of the mills, announced their decision to start a hospital for the benefit of the mill employees.

Mr. Balarama Iyer spoke a few words of thanks in his characteristic courteous manner, and his reply was read to the gathering by his chief lieutenant, Mr. T. K. Kodandarama Iyer. It contained a record of Mr. Balarama Iyer's selfless devotion to the cause of the development of the mills and the uplift of his employees. In his devotion to the interests of the mills he went to the extent of even suggesting to the Government to abolish the managing agency system. He then analysed the sound financial position of the mills and hoped that in post-war financial requirements the Cochin Government as usual would come to their rescue if needed.

"Women" observed Mr. Balarama Iyer, "make as good weavers as men. This is the only mill in India where women are employed as weavers, though in England and Japan there are women weavers. Out of about 850 single loom weavers about a third will be women weavers and the rest will be men. It will be interesting to note that in the matter of production the first five places are occupied by women and a male weaver comes only sixth. In spinning also the first two places are occupied by girl spinners and a boy spinner occupies only a third place."

Mr. Balarama Iyer concluded by enumerating some of the lessons which he had learnt from his practical experience during these years in the management of the mills.

Dr. R. M. Alagappa Chettiar, of Cochin Textiles, announced his endowment in commemoration of the occasion of a challenge cup for football to be competed for by the Cochin Textiles, the Alagappa Textiles and the Sitaram Mills every year.

Mr. C. P. Lonappen, Municipal Chairman of Trichur and a Director of the mills, then requested the Dewan President to unveil a full-size portrait of Mr. Balarama Iyer. Rising amidst cheers the Dewan President expressed pleasure at the happy coincidence of his own 60th birthday with the function, and paid tributes to the selfless work of Mr. Balarama Iyer, particularly in the industrial line. He then unveiled the portrait amidst great cheers.

Band and fire-works lent colour to the celebrations. The distinguished guests were garlanded and after thanksgiving the function came to a close with hearty cheers for His Majesty the King-Emperor, His Highness the Maharaja of Cochin, the Dewan and the honoured guest of the evening, Mr. Balarama Iyer.

Origin and Growth of the Sitaram Spinning and Weaving Mills

The Sitaram Spinning and Weaving Mills had, like all great institutions a very humble origin. The late Dewan Bahadur T. R. Ramachandra Iyer, B.A., B.L., Advocate of the Madras High Court, was the founder of the Mills.

In 1908, after celebrating the marriage of his eldest daughter, the thatched shed erected for the purpose was left intact and Mr. Ramachandra Iyer conceived the idea of putting up a few handlooms there. Five handlooms appeared in the pandal and this small business was named the Pushpagiri Weaving Factory and subsequently the shed was enlarged and the number of handlooms was raised to twenty. Mr. T. S. Balarama Iyer was put in charge of the factory. It was, however, soon realized that the handloom industry could not be made a commercial success and Mr. Balarama Iyer suggested the formation of a joint-stock company and the introduction of power-weaving.

Accordingly on the 24th of September 1909 the Pushpagiri Weaving Factory was converted into the Sitaram Weaving Mills, Ltd., and 50 power-looms and twenty-five handlooms started working with a capital of Rs. 1,20,000. The mill was named after Sree Ramaswamy, the presiding deity of the temple in Pushpagiri agraharam and thus invested with a religious background.

In 1912 the number of looms were increased to 150 consequent on the ever-increasing demand for the mill products and the capital was enhanced to Rs. 3 lakhs. The late Maharajah H.H. Sree Rama Varmah, G.C.I.E., honoured the mills with his royal visit and suggested that a spinning section also should be added to the mills. The royal suggestion was immediately taken up, the capital was further raised to Rs. 20 lakhs and up-to-date extensions to accommodate 2,000 spindles and 450 looms were made and in the year 1942 spinning was started with 10,138 spindles and 300 looms.

The formal opening of the Cotton Spinning section was done by Mr. C. W. E. Cotton, C.I.E., I.C.S., the then Agent to the Governor.

The mills continue to have additions in the spinning, weaving and engineering departments and has to-day 16,000 spindles and 425 looms run with a high super-heat bleeding turbine of 1,300 h.p. and it is now almost on a par with the best managed mills in India in the matter of machinery and equipment, management and staff, production and supply and the quality of goods produced. Its *dhotis* and grey longcloths, shirtings and other products, bleached or grey, can defy competition in any market in India.

The mills now work for 24 hours in three shifts and employ 3,000 hands of whom 1,200 are women.

It has arrangements for first-aid and medical service in cases of accidents.

In Jap-controlled Indies

Clothing from Ramie and from Banana and Pineapple Leaves

ON 24th August a Japanese-sponsored broadcast from Macassar, on the island of Celebes in the Netherlands Indies, announced the harvesting of the first crop of ramie, with which the Japanese authorities have been experimenting to replace the dwindling supplies of cotton. Ramie, which before the invasion of the Netherlands Indies, was imported from British India, was used exclusively as a substitute for jute in the making of sacks for storing sugar and rice. The Japanese, however, have found another purpose for the coarse plant; they will use it as clothing material. According to the broadcast, "the making of clothing (from ramie) for local inhabitants, by means of hand-weaving, has been successful, and a great deal is expected from this process in the future."

Not only ramie but also the leaves of banana and pineapple trees are being converted into material for clothing. The Japanese naval authorities in Banjermasin, in southern Borneo, have installed a spinning mill in that city, where Indonesian girls have been put to work making "endless streams of yarn." An enthusiastic radio commentator, broadcasting from Banjermasin on 29th August, said that the spinning mill is under the direction of a Tokyo raw-cotton company. "The machines installed in the mill are old-style ones," he said, "and they were imported from Java."—*Foreign Commerce Monthly*.

Tariffs and Industrialization

THE Oxford University Press, Bombay, brought out recently two pamphlets* of outstanding topical importance dealing with the subject of industrialization which has come to be universally acknowledged as indispensable for raising the standard of living in the country. The policy of "discriminating protection" so far followed has been of substantial assistance to consumption industries like textiles and sugar, but Dr. Matthai, one-time Professor of the University of Madras and Chairman of the Tariff Board and now a Director of the Tata Iron and Steel Co., Ltd., examines the limitations of the present policy and draws up tentative proposals for its revision in the light of the post-war needs of Indian industry. In the second pamphlet, Dr. Lokanathan, editor of the *Eastern Economist*, who had himself studied under Dr. Matthai at Madras, approaches the question from another angle and brings out lucidly the inescapable obligations of the Government towards formulating and carrying through an intensive policy of industrialization, which is examined under the different aspects of localisation, management, finance, etc.

Dr. John Matthai explains how, although the conditions laid down by the Fiscal Commission for the grant of protection are unexceptionable in theory, the way in which it has been administered in practice has been most unsatisfactory. While the policy has been a distinct success where it has been applied the author ventures the opinion that the additional burden of protection has been borne by the more well-to-do classes. As to the post-war period, Dr. Matthai believes that for about 5-10 years the demand for consumption as well as production goods will far exceed available supply, and during this period the problem will be "how to meet a reviving demand from countries which have been starved of goods with the limited supply available rather than to restrict supplies so as to avoid uneconomic competition and over-production." On this assumption, the assistance which Indian industries would require would be direct, e.g., finance, research, transport, etc., and not the indirect assistance which protective tariffs afford. When, however, normal peace economy returns, competition of the pre-war type may also return, but Dr. Matthai would not countenance "the perpetuation of national barriers to the free movement of trade" by the erection of high tariff walls. He quotes with approval the post-war plans† for international trade outlined recently by Sir Raymond Streat, President of the Cotton Board in England, and distinguishes as possible the three following stages in the development of India's trade policy after the war.

(1) During the years immediately following the termination of hostilities, it will not be necessary to adopt a policy involving other than a moderate restriction of imports as regards consumable as well as capital goods.

(2) While a large-scale industrial plan is under way, its successful prosecution will call for a policy of high tariff or similar restrictive measures for consumable goods and generally of free trade in capital goods.

(3) When the more essential industries envisaged in the plan have been established, the weight of restrictive measures will be shifted from consumable to capital goods. Since restriction in the case of capital goods, if enforced by means of high import duties, will lay a heavy burden on all industries, other measures of protection will have to be devised for the assistance of Indian industries producing goods.

In the second pamphlet under notice Dr. Lokanathan takes stock of India's industrial resources. It is the biggest producer of raw cotton next to U.S.A., it enjoys a monopoly of jute and has abundant supplies of wool. And yet industrial progress has been slow and irregular, so that India has continued for long to be an importer of manufactured articles. Dr. Lokanathan lists the various causes of such meagre and ill-balanced industrial development as has so far been registered. The initiation of the policy of discriminating protection led, however, to marked progress particularly in several consumption industries like textiles and sugar. The partial industrialization that has already taken place is reflected in the changing content of India's external trade. Between 1914 and 1939 consumption goods imports have diminished in relative importance while the imports of machinery and other production goods registered a significant increase, pointing to a gradual process of industrialization. Dr. Lokanathan agrees with Dr. Matthai that the too rigorous application of the principles laid down by the Fiscal Commission has thwarted the establishment of several vital production goods industries. Above all, the whole system of protection, he continues, "by which the prices of protected articles necessarily increased, was unsound so far as the protection of the key industries and the basic industries was concerned. These industries should have been helped not by protection but by so adjusting the system of public finance as to provide them with direct bounties and subsidies."

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*__Tariffs and Industry.__ By John Matthai, Oxford Pamphlets on Indian Affairs, No. 20, Oxford University Press, Nicol Road, Bombay. Price: 6 annas.

Industrialization. By P. S. Lokanathan, Oxford Pamphlets on Indian Affairs, No. 10, Oxford University Press, Nicol Road, Bombay. Price: 6 annas.

† See the *Indian Textile Journal*, June 1943, page 291.

At the outbreak of the present war Indian industries, for all the progress achieved, were still unorganized and comparatively inefficient and ill-balanced. Even the growth of consumption industries like textiles had not led to the creation of auxiliary industries like the manufacture of shuttles, bobbins, pickers, etc., on any considerable scale. But the war brought with it shipping restrictions, import restrictions, and failure of customary supplies from abroad, and these factors have, of course, quickened industrial production. For the first time several textile accessories are being manufactured in India and the textile industry itself has developed several new lines of manufacture. But compared with the progress made in Canada and Australia, India's record pales into insignificance, and Dr. Lokanathan's facts and figures speak for themselves. Starting from an initially worse position than India, Australia and Canada have already stolen a march over India. In the conditions obtaining in India to-day, therefore, Dr. Lokanathan pleads for a more direct and active association of Government with industrial activity. But it is realized that any plan of industrial development in India is bound to be a flop if it is not adequately backed by a national Government embodying the hopes and aspirations of the people. While Dr. Matthai emphasizes the need, therefore, for the early establishment of a national Government at the Centre, Dr. Lokanathan goes one better and shrewdly sounds a note of warning against the dangers of authoritarian control in any scheme of industrialization, whether the Government of the country is alien or national.

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Silk-worms in Brazil Kept Cool to Produce More Silk for War

SILK-WORMS are doing their bit for the Allied war efforts from refrigerators in Brazil, producing large quantities of the essential material which formerly came from Japan, says a statement by the Office of the Co-ordinator of Inter-American Affairs.

Like many other inhabitants of temperate zones, the silk-worm functions most efficiently in cool surroundings. Brazil, which has every facility for silk-worm culture except cool weather, is now employing refrigerators to speed up the life cycle of the silk-worm from cocoon to butterfly, thereby producing more eggs and young worms, and increasing silk production.

Tests conducted with refrigerators in experiment stations have shown that 10 crops of cocoons may be produced in one year by the proper application of cool air, and extensive refrigerating units have been installed in at least one experiment station to accelerate silk-worm production. The normal climate of Brazil is ideally suited to the production of the mulberry trees which are essential to silk-worm growth.

To make Brazilian silk production as efficient as possible in every respect, wide experimentation is being carried on with 300,000 mulberry trees to develop the most satisfactory strains. The product of this combined experimentation in mulberry-tree culture and silk-worm refrigeration will eventually find its way to parachutes, powder bags, and a host of other war materials, essential to Allied victory.—*Foreign Commerce Monthly.*

OUR PERSONAL COLUMN

Sir M. Visvesvaraya has been re-elected President of the All-India Manufacturers' Organization, Bombay, for the year 1945.

Raj Ratna Mr. Ramji Hansraj Kamani, Chairman of Kamani Group of Industries, has been re-elected President of the Jaipur Chamber of Commerce for 1945.

Mr. H. K. Kirpalani, I.C.S. (Retd.), formerly Adviser to the Governor of Bombay and ex-Prime Minister of Bikaner, has been appointed Industrial Adviser to the Government of India in the Department of Planning and Development.

Mr. Kirpalani has had wide administrative experience as Municipal Commissioner of the Bombay Corporation, Chairman of the Bombay Port Trust and Chief Secretary both of Sind and Bombay.

Mr. C. W. Tosh has been elected Vice-President of the Upper India Chamber of Commerce, Cawnpore, for the year 1945, while the following members have been co-opted as members of the Committee for the same year: Mr. W. J Packwood (the Cawnpore Chemical Works Ltd., Cawnpore), Mr. D. H. Peel Yates (Messrs. Bird & Co., Cawnpore), and Lala Ram Narain Garg.

Two labour experts—**Messrs. Raghavendra Rao** and **Staig**—have been invited by the Government of India to assist them on their proposals relating to Health Insurance. These officers belong to the International Labour Organization. They are being taken round India by the Government of India's own expert, Professor B. N. Adarkar.

The following members will constitute the Committee of the Bengal Chamber of Commerce for 1945-46:—President: Sir Renwick Haddow; Vice-President: Mr. H. D. Townhend; Members: Sir Harry Burn, Mr. H. D. Cumberbatch, Mr. A. J. Elkins, Mr. F. C. Guthrie, Sir George Morton, Mr. L. O. Tasker and Mr. P. F. S. Warren.

Mr. C. V. Nagaraja Sastri, Barrister-at-law, has been appointed Assistant Registrar, Trade Marks, Bombay.

Mr. Charles Lister was elected President for the current year, at the third annual meeting of the Bombay Wool Merchants' Association held in Bombay, Mr. J. Doongursee was elected Vice-President, and Mr. Haji E. Dossa, Honorary Secretary.

The Bombay Chamber of Commerce has elected Mr. W. A. Bell, Mr. R. W. Bullock, Mr. C. J. Damala, Mr. A. D. Finney, and Mr. D. R. C. Hartley to serve as representatives of the Chamber on the Board of Trustees of the Port of Bombay for a period of two years.

The following members have been elected to the Committee of the Cotton Buyers' Association for the year 1945:—Sir Joseph Kay (*President*); Mr. M. R. Ruia (*Vice-President*), Messrs. P. N. Philon, J. L. Hurschler, C. Shuttleworth, L. M. Khatau, R. C. Suntook, John R. Kay, Arthur Pether and J. P. Patel (*Hon. Secretary*).

Mr. P. H. Krishnarao, M.A. Commissioner for Development and Planning in Mysore, Secretary, Economic Conference, Superintendent of the Sri Jayachamaraja Occupational Institute and senior member of the Mysore Civil Service, has been appointed by the Government of India as Deputy Controller-General of Civil Supplies, with his headquarters at Bombay.

Mr. K. C. Mahindra, a business man who was till recently head of the Indian Supply Mission in the United States of America, has relinquished his charge, and the Government of India have decided to appoint **Mr. J. Vesugar** of the Indian Service of Engineers as head of the India Supply Mission in U.S.A. in succession to Mr. Mahindra. Mr. Vesugar was till recently Chief Engineer in the Punjab and subsequently Industrial Adviser to the Planning and Development Department of the Government of India.

Mr. B. B. Joshi, L.T.M. (Hons.), Additional Controller, Raw Materials and Stores, Department of Industries and Civil Supplies, Government of India, Bombay, has been awarded the associateship of the Textile Institute, Manchester, (A.T.I.) in recognition of his services to the textile industry of India.

Messrs. Tansukhrai M. Karundia, Kantilal Nahalchand, Raghunath B. Apte and Sir Joseph Kay, Kt., have resigned from the directorate of the Morarjee

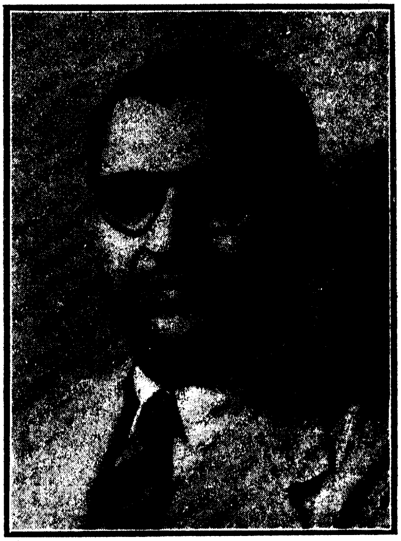
Goculdas Spinning and Weaving Co., Ltd., Bombay.

Rao Bahadur R. Guruswamy Naidu, landlord and Managing Agent, Palani Andavar Mills, Limited, Udamalpet, who was the recipient of the title of Rao Bahadur in the New Year Honours, was born in 1885 in a rich Kammavar family in the village of Pedappampatti. He commenced his business and public career early in life and has served for several years as District and Taluk Board Member and on the District Temple Committee. During the period of his membership of the District and Taluk Board, he was very keen on the formation and improvement of rural roads and linked many of the out-of-the-way villages with roads. He is a member of the Coimbatore District War Committee, member of the Local Government Hospital Advisory Committee and Director of the Land Mortgage Bank, Udamalpet, besides being connected with many charitable and public institutions.

Of a generous and charitable disposition Mr. Naidu built and donated a hospital and a school in his village in 1922 and last year he constructed a maternity ward in the Government Hospital, Udamalpet, in memory of his late wife Srimathi Rathnammal, at a cost of Rs. 60,000 with up-to-date sanitary and other equipments.

We understand that Mr. Naidu proposes to start a new cotton mill in South India just on the termination of the war and with this idea has already placed substantial orders for machinery and equipment with some leading English machinists.

Mr. B. M. Bagri has been elected President of the Bengal Millowners' Association, Calcutta, for the current year. He has been on the Committee of the Association for some years and was also its Vice-President. He is the Secretary of the Kesoram Cotton Mills Ltd., which is one of the biggest and well-equipped mills in Bengal. He is the representative of the Bengal Millowners' Association on the Advisory Panel of the Textile Control Board and on the Federation of Indian Chambers of Commerce food supply organization.



Mr. Bagri is a Commissioner of the Garden Reach Municipality and the Chairman of the Hindu Sramjivi Library and School, Matiabruz.

Mill Staff News

Mr. S. G. Chowdhury, B.Sc., has joined the Moon Mills Ltd., Bombay, as Assistant Manager and not as Factory Manager as mentioned in the January issue of this Journal.

Mr. M. G. Dhanuka, M.Sc., Betterment Secretary, has been promoted to the post of General Secretary of the Savatram Ramprasad Mills Co., Ltd., Akola. He is also the General Manager of all other Savatram concerns. He comes from a respectable Marwari Agrawal family.

Mr. D. Fernandes (late of the Century Spinning and Manufacturing Co., Ltd., Bombay), Carding and Spinning Master of the Shri Laxminarayan Mills Co., Ltd., Chalisgaon, East Khandesh, has been promoted to the post of manager since 18th January 1945.

Mr. Chandubhai J. Patel, B.Sc. (Bom.), M.Sc.Tech. (Manchester), A.M.C.T., F.C.S., has joined the Shree Ambica Mills Ltd., Ahmedabad, in the capacity of Chief Chemist and head of the Bleaching, Dyeing and Finishing Departments.

Until recently he was working with the Monogram Mills Co., Ltd., Ahmedabad, as their Chief Chemist and Head of Bleach and Dye Works. He was also consultant as a Textile Chemist to the Ahmedabad Commercial Mills Co., Ltd., and also Messrs. India Textile Agencies specially regarding execution of Government war orders. After taking the degree of B.Sc. of Bombay University in 1934, Mr. Patel joined the Indian Bleaching, Dyeing and Printing Works Ltd., Bombay. In 1935 he went to England and joined the College of Technology, Manchester, where he passed the B.Sc. Tech. with first class first. In view of his satisfactory work as an undergraduate and his aptitude for research work he was awarded the Manchester Corporation Research Scholarship in Technology, which enabled him to obtain the degree of M.Sc.Tech. in 1938. During the college vacations he had practical training in several dye works in England and Germany. He, also, worked in the laboratories of Imperial Chemical Industries Ltd., England, and of I.G. in Germany.

Mr. Bhupesh Lobhan Sen, Laboratory Officer, Volkart Brothers, Dyes Department, Bombay, has been elected an ordinary member of the Textile Institute, Manchester, England, at a recent meeting of the Institute.

Mr. Sen belongs to a respectable family of Sonargaon, Dacca, Bengal, and while studying in the B.Sc. course at the Calcutta University he showed a partiality for colour chemistry. With that view he left studies and joined Messrs. Havero Trading Co., Bombay (afterwards Chemdyes Limited) and worked as laboratory technician under the direct supervision of Dr. Winterhalder, dealing with the dyestuffs of I.G. Farbenindustrie A. G., St. Denis and Etablissements Kuhlmann of Paris, Rohner and Durand and Hueguenin of Switzerland. During that period he was also visiting the Bombay Union Dyeing Mills.

He has joined Messrs. Volkart Bros., Bombay, who had then taken over the agency of C.M.C. French Dyes. At present he conducts laboratory technical work relating to textile dyeing, printing and allied work for them.

He has contributed articles occasionally on textile dyeing and industry to Bengali and other vernacular papers.

Mr. Bhishmasen Ishwarlal Matchhar, A.R.T.C. (Eng.), son of Mr. Ishvarbhai Patel, Consulting Enginer to textile mills, has recently returned from England after a stay of five and a half years. After spending 1½ years in the bleaching, dyeing, finishing and printing departments of the Standard Mills, Bombay, as an apprentice under the guidance of Dr. A. M. Patel, Mr. Matchhar sailed for England for further studies in 1939 at the age of 18 years, and joined the Royal Technical College, Salford, and underwent an exhaustive three-year course in pure and textile chemistry and obtained diploma in 1942. In the same year, he passed in the first class the final examination of City and Guilds of London Institute in dyeing and textile from time to time in the administration of the Control Orders, and with the activities of the Federation and its various member bodies. One of the primary objects of the Federation is to organize the cloth and yarn trade on a nation-wide scale and disseminate enlightened and progressive views wherever necessary. The News Bulletin can be of great help in fulfilling this purpose, provided necessary co-operation is forthcoming from all those concerned in making it a live and influential mouthpiece of the trade.

Journal of Scientific and Industrial Research, III, 8, New Delhi.

The scope for developing the manufacture on a cottage industry basis of silk-worm ligature gut, used as sutures in surgical operations, was described succinctly in an article which appeared in the *Indian Textile Journal* in January 1943 (page 111). The article dealt with the raw material, the treatment of worms, the process of extraction, the treatment of guts, cutting, sorting and grading, and the preparation of guts in long lengths.

In an article in the issue of the *Journal of Scientific and Industrial Research* under notice, details of a war-time industry started to meet the pressing needs of the surgical profession, namely, the silk-worm ligature industry at Kollegal, are given. The initiative for the production of surgical guts was taken by the Department of Industries and Commerce, Madras. The entire process for extracting the silk glands from mature, robust, mulberry silk-worms and drawing them out into strong suture guts suitable for the use of the surgeon has been systematically worked out.

Pessimism in Planning. By A. N. Agarwala, M.A. Published by Kitab-Mahal, Zero Road, Allahabad. Price: Rs. 5-12-0.

The book under review should be highly welcome at this stage of India's industrial development. Planning is very much in the air, and its objects and methods have been the subject of discussion in the Press and on the platform. While this is all to the good, it would appear that not enough importance has anywhere been attached to the hurdles to be overcome and the difficulties to be surmounted in putting the plans into effect. Mr. Agarwala's essay tries to meet this deficiency. While it does not attack the advisability and necessity of planning for the effective regeneration of Indian economy, it does what few other publications set out to do; it draws the reader's particular attention to the difficulties in the way of implementing the plans and to the necessity of solving or overcoming these difficulties before any really effective plans could be initiated. In this view it is hard to exaggerate the value of Mr. Agarwala's work.

Planning India's Electrification. By K. V. Karantha, M.A., P.O. Box 156, Madras. Price: Re. 0-6-0.

Mr. Karantha, who was until recently connected with several electricity undertakings in the province of Madras and has since been appointed Chief Electrical Inspector to the Government of that province, writes in this booklet on the 7,00,000 K.w. power-plant expansion scheme of the Government of India, and points out the urgent need of developing and multiplying electricity-using industries in India. He makes several useful suggestions for overcoming the obstacles to cheap electricity in a country like India and will be read with profit by all interested in the subject.

Maintenance Instructions for Air Break Circuit Breakers is the title of an excellently got-up booklet issued gratis to all existing users of air break circuit breakers by **J. G. Statter & Co., Ltd., 82, Victoria Street, London, S.W., England.** The book gives useful guidance in the installation and maintenance of "Statter" air break circuit breakers.

Morris Worm-gear Pulley Blocks. Published by Herbert Morris Ltd., Lougborough, England. (Book 199). (Indian Agents: W. H. Brady & Co., Ltd., Royal Insurance Buildings, Churchgate Street, Bombay).

The purpose of a good pulley-block is to yield a maximum of lift in return for human effort. In Morris pulley-blocks, this objective is achieved remarkably well, through the use of a machine-cut worm and worm-wheel of just the right pitch angle and tooth profile to give the highest mechanical efficiency.

The gears are housed in a rigid steel frame to ensure continuous alignment. Their motion is so easy that a load on the bottom-block would set them rotating. So a one-way automatic brake is fitted. This allows free rotation in lifting but creates just enough resistance in lowering to keep the load in balance. The brake resistance is at all times proportional to the load on the hook.

If a pulley-block is to operate smoothly there must be perfect meshing of the load-chain with the loadwheel. The pockets of a Morris loadwheel are believed to be actually moulded to receive a chain whose links are very precisely formed. The combination of chain and wheel is, therefore, a mechanism which should lift loads without jerk or slip.

G.E.C. Osram Bulletin, Vol. 22, No. 2. Published by the General Electric Co., Ltd., Magnet House, Kingsway, London, W.C. 2. The issue under notice includes highly interesting articles on infra-red lamp heating in industry and on some special uses of fluorescent tubes.

Delhi Cloth Mills Technical Journal: June and September 1944. Recently the Delhi Cloth Mills have started a course of training for preparing jobbers and *maistries* for the various departments of a spinning mill. Educated young men are taken up and given thorough theoretical and practical training in a room specially set apart for the purpose and equipped with all the necessary machines and tools. The issue of the *Technical Journal* under notice contains, besides other interesting articles, schedules for dismantling and erecting a fly-frame, which form part of the instruction given in the spinning staff technical school referred to above, as well as the curriculum of studies in the school.

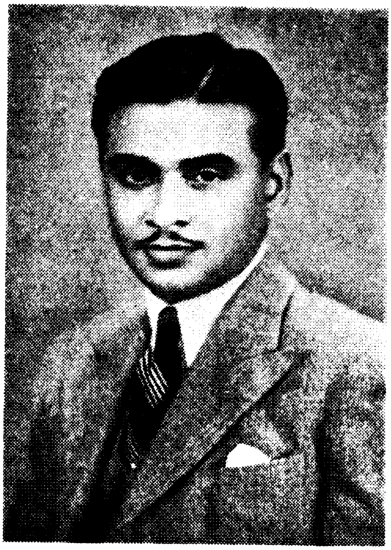
* * *

In the course of an interesting article on the role assigned to the State in the Adarkar scheme of sickness insurance, in the February 1945 issue of the **J. K. Review**, Mr. A. N. Agarwala, of the Allahabad University, demonstrates how Mr. Adarkar has skilfully solved several difficulties regarding State contribution to the sickness insurance scheme and State control of its administration, and draws the reader's attention to important suggestions contained in it.

Leather Belting for Power Transmission

How to Use it Economically

MOST users of leather belting, even some of the largest in the country, pay very little attention to the care of leather belting once it has been purchased. This carelessness, born of ignorance, is bound to cause unnecessary loss, for constant care should be given to the belting during its storage as well as in operation. Here are a few suggestions that will enable the user not only to get the maximum efficiency but longer life out of a belt.



MR. N. J. NAIR, Managing Director, Textile Supplies Syndicate (India), Ltd., Bombay, who has written this article, has had practical training in leather belt making at the factory of Graton and Knight Co., U.S.A., one of the largest of its kind in the world.

During Storage

Store the belting in a cool dry part of the godown. Exposure to the sun is liable to harden the leather and hence reduce its natural flexibility, which is most essential during operation. If there is dampness near and around the belting while being stored it will cause fungus or mildew to be formed on the surface and between the coils. This condition must not be allowed to arise as the belting will deteriorate in its vitality just as human beings do during an attack of pneumonia.

Once every three months open out the rolls of belting on the floor and apply a suitable belt dressing lightly on both sides of the belting. Then re-roll them and put them back into the racks.

It is recommended that the rolls of belting are stacked in a standing position to facilitate convenient handling while taking out for dressing, and for cutting out required lengths. Keeping the roll flat on the floor or one over the other is liable to damage the edge of the belting while handling.

Before Operation

The exact length required for a given drive may be determined by running a steel tape around the pulleys tightly and then allowing six inches more in the case of single-ply belting upto five inches width. For widths of 6″ to 10″ single-ply belting, nine inches more are recommended. This extra length is intended for lap when joining the two ends of the belting to make it an endless belt ready for power transmission.

It is not advisable to put one end of the belting over the other while lacing, as such overlapping will impede the smooth and efficient running of of the belt on the pulleys. The most satisfactory way is to taper both ends of the belting and then make a lace joint. This method will give an evenness throughout the belt and would, therefore, ensure smooth operation.

Another satisfactory method of joining the two ends of belting before putting on the pulleys is to use a steel belt lacer of the clipper type. In this instance tapering of the ends is not necessary and the square ends, after lacing, can be brought to meet edge to edge and hooked together with a raw hide or bakelite pin. When joining the ends of double belting the most satisfactory procedure is to adopt the steel belt lacing as described above as long as the width of the belting is not over six inches. For belts above this width it is advisable to use a waterproof belt cement and make the belt endless before putting on the pulleys or to do the cement jointing on the pulleys with the assistance of clamps and rods.

Note.—Most workmen in charge of leather belting generally punch extra holes near the lap in order to speed up the work when a belt has become loose and it has to be tightened. This is a most unsatisfactory practice, as the open holes will weaken the belt very considerably in that particular part and will even cause the belt to snap during operation. Workmen must therefore be warned against punching any extra holes after a joint has been made.

During Operation

It is recommended that the leather belt is run on the grain or polish side to the pulleys. Experiments have proved that there is more coefficient of friction on the polish side of a leather belt, and that there will be less slippage, if at all, by running the belt with the polish side close to the pulleys. A microscopic observation of the polish side will show that the grain of the leather on the polish side is much more uniform. These grains which form into air sockets will enable the belt to cling to the pulleys more tenaciously than it would be possible with the flesh side of the belt to the pulleys.

Operate all leather belts just as slack as possible without slipping. When it becomes necessary to operate a belt tightly in order to make it pull the load there is sure to be something wrong with that drive and, therefore, it should be speedily remedied. Either the belt does not have a good pulling surface or it is too small for the job.

Inspect periodically the machines and the shafting to ascertain that the alignment is proper.

Pulleys improperly aligned will ruin belting. Just because that shafting was once in line it does not necessarily follow that it will always remain so. Therefore, frequent inspection in this regard will be most beneficial.

When a belt is being installed it should be given a good treatment with a suitable belt dressing. After working for some time, if a belt appears harsh and dry, it indicates that wear has removed some of the natural oils and these oils should be replaced. To do this, remove the belt from the pulleys and clear the surface of all dirt carefully with a blunt-edged scraper, or if necessary, with petrol. When the belt has been cleaned, apply belt dressing lightly on both sides, and put the belt back into service.

Surplus grease and oil are injurious to belting and give it a poor frictional surface, which causes slippage. De-greasing or de-oiling can be accomplished by removing the belt and packing it in dry saw-dust for some time before being put back into the job. The saw-dust will absorb all the excess oil and/or grease in the belt.

As belting plays a very important part in the profitable working of any factory it needs no emphasis that the utmost care must be exercised in the purchase of a good quality and in its maintenance. In the factories of most European countries, generally, a belt engineer is maintained whose only job is to purchase suitable belting for his drives and attend to its economical use. I would strongly recommend such a course being adopted by Indian mill and factory owners, most of whom, whether they know it or not, are at present wasting considerable amount of money due to want of care in this most important matter.

New Cotton Mill for Bengal

Bengal Cotton Mills, Ltd.

A COMPANY has been formed, called the "Bengal Cotton Mills Ltd." (Registered Office: 15, Clive Street, Calcutta) for the purpose of carrying on the business of spinning, weaving, dyeing, bleaching, mercerizing and printing of cloth and yarn and it intends to specialize in finer varieties of yarn and cloths. The site proposed to be acquired for the mills of the company is situated at Sodepur only about 10 miles from Calcutta and easily accessible to Calcutta by motor, rail and river. Trained and efficient labour will be assured; coal will be available in any quantity from the neighbouring Bengal and Bihar coal-fields; raw cotton will also be easily available as Calcutta already imports a large quantity of various kinds of cotton. Bengal, and especially Calcutta, is a big centre for consumption of cloth and yarn of the various counts and varieties and the local mills are quite insufficient to meet the demand. The war has proved conclusively that the present cotton mills in India, even if they work up to capacity are unable to meet the internal demand of cloth and yarn and specially of the finer varieties. Bengal is particularly lacking in this respect. The few mills situated in Bengal are wholly insufficient to meet the demands of Bengal. If there had been more mills in Bengal it would not have had to pass through the cloth famine through which it is passing now. For a requirement of about 1,000 million yards of cloth Bengal produced only 220 million yards during April 1943 to March, 1944. There has always been a good demand for the products of Indian mills from the neighbouring countries and, due to the devastation caused by the war and the big reconstruction programmes of the various countries, such demand is likely to increase to a great extent after the war. The cotton mills, especially those in Bengal, have a very bright future before them. Calcutta has all along been one of the important centres for supply of yarn and cloth both for internal consumption and for export, and its importance is likely to increase after the war. The existing mills are not equipped with the latest machineries. The company proposes to equip its mill with about 40,000 spindles and 800 looms and with the latest types of machineries incorporating the improvements which the accelerated research during the war has made possible. Provisional orders for part of the machinery have already been placed and every effort is being made to import the machineries as early as possible. With the prospect of an early termination of the European war in favour of the Allies, it is expected the machineries will arrive shortly, and the company therefore proposes to purchase land and to construct the buildings at an early date so that no time may be lost in erecting the machineries after they arrive in India. It is expected that the erection of the mills will be completed and the mills will start working within about a year after the termination of the war.

The Directors of the company are: Lala Guru Sharan Lal, Mr. Chandi Prosad More, Mr. Rameswar Lal Nopany, Rai Bahadur Kedarnath Khetan, M.B.E., M.L.C., Raja Narayan Lall Bansilal, Merchant, Mr. Lakshmi Narain Bhadani and Mr. Radhakishan More.

Messrs. More Bhadani & Co., Ltd., 15, Clive Street, Calcutta, are the Managing Agents of the mill.

The company has been formed with an authorized capital of Rs. 50 lakhs, divided into 3½ lakh ordinary shares of Rs. 10 each and 15,000 preference shares of Rs. 100 each. The issued capital amounts to Rs. 30 lakhs, divided into 2 lakh ordinary shares and 10,000 preference shares.

Commercial and Technical Organizations

Federation of Indian Chambers of Commerce and Industry, New Delhi

18th Annual Session

THE following are extracts from the presidential address of Mr. J. C. Setalvad at the 18th annual session of the Federation held in New Delhi on the 3rd March 1945:—

"It is a matter of painful surprise that the authorities, with all the sources of information at their disposal, should have permitted the coal situation to deteriorate to the extent which was experienced last year. In my opinion this is very largely attributable to the deficiencies in our general statistical organization which does not provide at any given time up-to-date data to make possible the formulation of right policies both as regards immediate conditions and future development. The failure on the part of Government to tackle this situation in advance must also be attributed to the fact that several departments of the Central Government are partly responsible for handling the coal situation. I fail to understand that when countries like the United Kingdom and the U.S.A. with their enormous manufacturing capacity, can produce thousands of planes, tanks, trucks, etc., it should be found impossible for the Government of India to obtain from these countries coal-cutting and other machinery as well as essential stores to enable Indian collieries to produce larger output. It is also not easy to understand that with the enormous man-power in the country, shortage of labour should handicap maintenance of even pre-war output. Two directions in which Government ought to concentrate are the conservation of our superior qualities of coal for our metallurgical industries and, secondly, intensive geological surveys throughout the country to find additional sources of coal supply.

Mr. Setalvad said that the Hydari Mission had something to do with the coal situation. He feared that it was the intention still further to curtail the operating capacity of some of India's big industries, such as steel and chemicals, which required large supplies of coal and to replace the reduced output by imports from abroad, particularly from the United Kingdom. Mr. Setalvad, on behalf of the Federation, registered an emphatic protest against any such action on the part of the Government of India and demanded that the Indian public should be taken into confidence regarding the Hydari Mission.

Reconstruction and Planning

"The Planning Member in one of his public statements said that Government were considering the question of instituting a permanent Tariff Board. I cannot understand why there should be so much delay in Government taking immediate action in this direction. The institution of a permanent Tariff Board would make possible detailed and scientific examination of new industrial projects which could in the near future be brought into existence with, if necessary, the assistance of Government on the recommendation of such Tariff Board. Government also must clarify their existing nebulous attitude towards the number of new industries started during the war by referring their cases to this Tariff Board and on their recommendation give a categorical assurance that Government would stand by such industries after the war. There are a number of small and medium scale industries which to-day are rendering a very important and useful service in the supply of materials to our large industries and which before the war were practically entirely imported from abroad. It appears that in recent months under the guise of making available larger quantities of consumer goods to the country, competing imports of such products have already started, prejudicially affecting these new industries. Here is a case where immediate action is called for on the part of Government and imports of such competitive goods should be so regulated that the new industries are allowed to work at their maximum capacity to supply the needs of the Indian market and that foreign imports be restricted only to make good the balance required."

"I am glad to say that during the past year we have got going our Research Department. Its activities at present are extremely limited but it is capable of rendering very useful and valuable services, provided in course of time it is gradually expanded to cope with the necessities of the situation. I, therefore, make a most fervent appeal to all interested in promoting India's commercial and industrial activities to contribute substantially to the resources of the Federation."

The session was attended by representatives of the various Chambers of Commerce and Sir Jeremy Raisman, Sir Ardeshir Dalal, Sir Azizul Haque, Sir A. Ramaswamy Mudaliar, Mr. Bhulabhai J. Desai and members of the Central Legislature.

After Mr. J. C. Setalvad's presidential address, the meeting passed a number of resolutions.

The Federation passed a resolution urging the necessity of an early declaration of industrial policy by the Government of India on three points, namely, the role of the State in future; the measure and extent of protection to be extended against internal and external competition to Indian industries both in existence and those that may be started hereafter; and India's participation in any international arrangements which may impede the fullest utilisation of India's resources.

Working of Controls

It also adopted a resolution moved by Sir Badridas Goenka on the effect of various controls on trade and industrial development. The Federation expressed its concern at the working of the numerous controls imposed by the Central and the Provincial Governments from time to time relating to the import and export of commodities, procurement, purchase, distribution, transport and movement of commodities from place to place, as those controls had resulted in bribery and corruption and had not only dislocated smooth and efficient working of the normal channels of trade but had also failed to produce the desired results. The Federation was further of the opinion that the system of the controls which should have been designed and worked so as to accelerate production rapidly had, in the main, been restrictive and injurious and had created artificial difficulties in the conduct of trade and industry by imposing undue restrictions on the floating of new concerns and on the grant of import licences for importing raw materials, plant and machinery for increasing industrial production. The Federation believed that in any scheme of Government control, the association of non-official commercial and industrial interests should have been a *sine quo non* of its imposition and working, if inefficiency, delay and failure were to be avoided. It urged the Government to review the administration of all controls, revise and rationalize them so as to encourage industrial and agricultural expansion and facilitate smooth and quick distribution through normal trade channels.

Sir Sri Ram asked how Indian industries could flourish if they were not given adequate transport facilities and coal. He said that a deputation on behalf of the Federation had waited on the Commerce Department and represented that certain industries in India were capable of fully meeting the country's demands, and yet orders for the articles had been placed abroad at higher rates than those that prevailed in India. The deputation was told that there had been a mistake, but Sir Sri Ram said, some Indian industries would have to suffer for that mistake.

India's Export Trade

Sir Chunilal B. Mehta (Bombay) moved a resolution on the development of India's export trade. The resolution asked the Government of India to take energetic steps to enable Indian industries not only to maintain their present position in the foreign markets but also to secure an increasing share of those markets in the post-war period. "The Federation is of the opinion," the resolution stated, "that with a view to securing a proper place for India's exportable surplus of raw materials, the Government of India in consultation with the interests concerned, should devise measures to counteract the effects arising out of the subsidized exports of raw materials by other countries in foreign markets and to secure a more advantageous position for such of India's monopoly raw materials as raw jute, raw cotton, mica, etc."

Sir Chunilal explained how during the war a situation had arisen by which the old connections of Indian exporters were slowly disappearing. The main reason for that was the activity of the U. K. C. C. and some of the countries of the world centralizing their purchases in India through their own agencies.

Lala Karamchand Thapar moved a resolution expressing concern over the future prospects of further industrialization of India unless an increasing production of coal was assured by Government taking all possible steps at an early date to explore new sources of supply by undertaking an extensive geological survey of India: by rationalizing the existing resources and by the railways offering such prices for coal as would ensure the continued operation of the collieries and provide for their proper development. The resolution also urged that low volatile coal should be conserved for the metallurgical industries and should not be frittered away by supplying bunkering coal at Indian ports for the requirements of Allied Nations.

Taxation Policy

Mr. D. P. Khaitan moved a resolution declaring that the war-time taxation policy of the Government of India in respect of industries tended to hamper the post-war industrial development in the country. It left inadequate reserves to meet the post-war requirements of industries for necessary renewals, replacements and expansion of their capital assets and thereby undermined their stability and competitive strength *vis-a-vis* industries in other countries. The Federation urged upon Government the necessity of so formulating the tax structure as would positively encourage and accelerate the industrial progress of India.

The Federation decided by a majority to increase the subscription of member bodies from Rs. 200 per year to Rs. 500.

New President

Sir Badridas Goenka was unanimously elected President, Lala Gurusaran Lall, Vice-President, and Mr. N. R. Sarker, Treasurer of the Federation for the coming year.

The Millowners' Association, Bombay

Rehabilitation of the Cotton Textile Industry after the War.—A representation was made by the Association to the Central Board of Revenue in connection with certain matters relating to income-tax and excess profits tax administration recently.

The following is a brief resume of the points made by the Association and the Government's reply in the matter:—

The first point raised by the Association was in regard to the expenditure which would have to be incurred by employers in reconverting the industry to the post-war footing, especially if that expenditure had to be incurred after the E.P.T. had been removed. The Association had suggested that Government should make it a rule that, if such conversion took place within a specified reasonable period after the termination of the war or the removal of the E.P.T. whichever was later, it should be allowed as expenditure and adjusted in the last E.P.T. assessment. Government's reply was that, if during the excess profits tax chargeable accounting periods a mill were to be reconverted to its former state, the cost of reconversion would be allowed as a revenue expense, but that the question of expenses similarly incurred after the termination of E.P.T.

was a matter to be considered with many others when providing for the termination of the tax.

The Association had suggested that, where an industry had set aside a special sum for repairs and renewals, it should be allowed as a deduction for the purpose of E.P.T. even though it had not been utilized on the understanding that, if the amount was not utilized within a reasonable period after the termination of the war, then, whatever had not been utilized would be regarded as income in the last year of the E.P.T. and assessed as such. To this suggestion, the Central Board of Revenue had pointed out that deferred repairs were already provided for under section 26 (3) of the Excess Profits Tax Act, and that there was, therefore, no reason for action as proposed by the Association. The Association did not consider this reply to be quite satisfactory, and an assurance was asked for from Government to the effect that a claim for deferred repairs could be permitted which would allow the industry the cost of putting in the genuine spare parts which would have been used under normal conditions so that machinery could be put into the condition in which it would have been kept in normal circumstances, subject, of course, to normal wear and tear.

The third point raised by the Association was that the return of the industry from war-time production to peace-time production might involve the scrapping of buildings, plant and machinery which had been provided as a part of the war effort. The law already provided relief in respect of any losses so incurred, but it was thought that relief should not be confined to cases where equipment was actually scrapped, but should cover also any loss of value in cases where the equipment might continue in use. Government stated that this point had been noted for further consideration.

The fourth point related to trading stocks with mills, and the suggestion was that, if valuation taken for purposes of assessment in the last year of E.P.T. was not realized within a reasonable period thereafter, the assessee should be given an opportunity for reopening the last E.P.T. assessment with a view to set off the loss which had arisen from the drop in valuation.

Control of Electricity Supply Industry.—The views of the Association on the subject of State or quasi-State control of electricity enterprise were recently invited by the Government of Bombay. The Association were of opinion that there was no justification for the recommendation embodied in the draft resolution that further development of electricity supply in India should be actively pursued as a State or quasi-State enterprise. The experience of the member mills of the Association was that the service rendered by privately managed supply companies in Bombay had been entirely satisfactory. The Association, therefore, felt that it was unlikely that State or quasi-State managed enterprises would be as efficient as the privately managed concerns, and they apprehended that an attempt might be made to subsidize the losses from the proposed extensions into rural areas out of the charges made to industrial consumers in urban areas. So the Association considers that the development of electricity should be left to private enterprise under the control and supervision of Government.

Restrictions on working looms or loom hours.—A notification was issued by the Joint Secretary to the Government of India, Department of Industries and Civil Supplies, towards the end of December, imposing restrictions on working looms or loom hours. Briefly stated, the notification provided that save with the written permission of the Textile Commissioner, no manufacturer of cloth other than handloom cloth, shall work or cause or permit to be worked in his undertaking: (*a*) looms in excess of the number of looms working in the undertaking on 30th September 1944; and (*b*) any loom for a period which in any one month exceeded the average number of hours of work per loom per month in the undertaking during the year ending 30th September 1944.

The effect of this notification was that without the previous written permission of the Textile Commissioner, no cotton mill would be permitted to increase the number of working looms or loom hours beyond the limits attained in September 1944.

In this connection, it was also felt that the cases of mills which had been or were at present manufacturing heavy sorts, like canvas, against defence requirements, deserved consideration. As soon as these orders were completed, the mills concerned would naturally like to switch back to their civilian market, and this could not be done unless they increased the number of looms or the loom hours to absorb the higher count of yarn which would be spun in place of the yarn which they were making for canvas. In this view of the case, it followed that, unless every application for extra loom or loom hours was promptly granted by the Department, the notification would create a very difficult situation for the mills.

The notification, it appeared, sought to defeat the fundamental objectives which Government and the industry had in view when the Textile Control Board and the Cloth and Yarn Control Order were set up. Two of the most important objectives which those concerned had in view when the Textile Control Board was set up were (*a*) to increase the production of cloth; and (*b*) to bring down prices of cloth and yarn to reasonable levels. In other words, both the industry and Government had in view the production of increased quantities of cloth and their distribution at *controlled prices*. There was for the time being no control of prices so far as the handloom industry and its manufactures were concerned, and it was therefore difficult to understand why Government, far from seeking to increase production of mill-made goods, which could be distributed at controlled rates, now sought to put a ceiling limit to such production and increase handloom manufactures where there was no price control. It was not clear whether Government did not consider that the incentive, which was at present being held out by them for the increased production and distribution of handloom cloth, which was not subject to price-control, would not, in its turn, encourage profiteering even in mill-made cloth and drive it into the black market.

Responsible officers of Government including the Honourable Members in charge of various portfolios had repeatedly urged on the Indian cotton textile industry the urgent need of stepping up production, and it was therefore difficult to reconcile these appeals with the notification. The official action of the nature visualized in the notification had for its object the improvement in the productive capacity of the handloom industry at the sacrifice of the Indian cotton mill industry and to the ultimate detriment of the consumer of cloth in this country. A dispassionate consideration of this question and an analysis of all the figures pointed only to one conclusion, viz., that the step taken by Government was ill-advised. If, as was likely, Government's justification for the issue of this notification was scarcity of yarn for the handloom industry, the figures for the year 1943-44 disclosed that sufficient quantities of yarn were available for consumption to the handloom industry. There might perhaps be scarcity in particular Provinces or centres, but the Association felt that this might be due to inadequate transport or unavailability of yarn in the counts in which the handloom industry actually wanted it.

It is understood, however, that, mills producing their own yarn would be permitted to increase their weaving capacity provided they released the normal surplus to the handloom weavers as they used to do hitherto, and that in the case of those mills which formerly obtained their yarn from the market, they would continue to do so without exceeding their normal purchases.

Compensation for involuntary unemployment due to shortage of coal, raw material, etc.—Para 1 (*c*) of the Government proposals for the grant of compensation for involuntary unemployment due to shortage of coal, raw materials or changes in lines of production for which adequate notice cannot be given reads as follows: "The proposals do not cover closures of which adequate notice is given under Standing Orders, whether statutory or voluntary."

In forwarding Government's proposals to the Association, the Commissioner of Labour pointed out that *prima facie* notice of one month would satisfy the requirements of para 1 (*c*). The Commissioner of Labour also referred to paragraph 2 (*b*) of the proposals and stated that repeated closures for 7 days or less separated by short periods would be regarded as not in accordance with the intention of that para.

The Association felt that a month was too long a period for any employer to come to a conclusion that raw materials might not be available on account of transport difficulties. Notices of suspension of work of whatever nature were likely to irritate the workers, and the Committee thought that such contingencies should be avoided as far as possible and notices put up only in cases where they were absolutely essential. If, however, Government insisted on giving a month's notice, it was very likely that notices would be put up which might subsequently turn out to be unnecessary. In the opinion of the Association the best solution of this state of affairs was to reduce the period to 14 days.

Turning to the point made by the Commissioner of Labour regarding intermittent unemployment if Government were of the opinion that a situation was likely to arise under which closures of less than 7 days duration each and separated by short intervals were likely to occur, then the best way of meeting the situation would be to make arrangements even now to avoid it by adopting a more liberal policy in the matter of wagon supplies and a businesslike policy in the matter of placement of orders for textiles for Defence requirements.

As regards the rate and condition of payment, the Association reiterated their view that in the best interests of all concerned, the Government of India should issue an order under the Defence of India Rules, so that there may not be any question of individual provinces acting according to their own wishes and interpretations.

Marine War Risk on Cotton Cloth and Yarn in Transit By Sea.—Recently the Association made a representation to the Textile Commissioner requesting facilities for free marine war risk insurance on cotton piecegoods and yarn which had been withdrawn from 1st May 1944. This was granted but it was available only for the transport of cotton piecegoods and yarn by sea between Bombay and Calcutta and for yarn by sea between Madras and/or Tuticorin to Calcutta. The Association felt that the facility of free marine war risk should be extended to all shipments of cotton yarn and piecegoods sent from one Indian port to another Indian port and that if this suggestion was not acceptable, the concession should at least be extended to cloth as well as yarn which were moved under the special instructions of Government to various destinations by specific sea-cum-rail routes or sea routes. It is understood that, with a view to equalize as nearly as possible the difference between rail and sea charges for the transport of goods, the Government of India have prepared a scheme. First, port-to-port rail rates for the carriage of these commodities will be raised so as to make them comparable to the costs by sea, exclusive of marine war risks insurance charges. Secondly, by arrangement with the underwriters of marine insurance, free marine war risk insurance cover will be provided at Government expense on all consignments of these goods which are sent by steamer or country craft, on the condition that the consignor has at his own cost obtained a policy of ordinary marine insurance from an underwriter of his own selection.

War Risks (Goods) Insurance Scheme—rate of premium.—The question of effecting a further reduction in the rate of premium charged by Government under the War Risks (Goods) Insurance Scheme was considered by the Association.

It was estimated that the Fund had to its credit about Rs. 20 crores, and bearing in mind the fact that the risk of damage by enemy action was now more remote than it had at any time been since the commencement of hostilities, it was thought Government might continue the Insurance Scheme for another year free of premium. The Association stated that they had no objection to a levy being made on the industry if at the end of 1945-46, Government found that the amount standing to the credit of the fund was insufficient to meet outstanding claims.

The rate of premium was subsequently reduced from one anna three pies to one anna for every Rs. 100 per month with effect from the quarter commencing from 1st January 1945 and to nine pies for the next quarter.

War Risks (Factories) Insurance Ordinance—extension of the scheme.—The War Risks (Factories) Insurance scheme was extended for one year with effect from 1st April 1944. The extended period would expire on 31st March 1945. The Association felt that as the danger of damage to property by enemy action was now more remote than ever, and as the fund had a substantial credit balance, Government might not be taking any risks by continuing the scheme for a further period of 1 year free of premium. If the amount standing to the credit of the fund was subsequently found insufficient to meet the claims, there would be no objection to a premium being collected to meet the deficit.

Bombay Government Post-war Development Committee.—Early in January, the Government of Bombay proposed to appoint a committee to co-ordinate the activities of the various authorities in the Bombay City and Greater Bombay in connection with post-war development, but the Association was excluded in the matter of representation on it. The matter was, therefore, taken up with the Government. The Association counted amongst its membership all cotton mills in the city which, apart from making a very substantial contribution to the revenues of the local Government and the Bombay Municipal Corporation, gave employment, directly or indirectly, to a very large section of the population of the city. In this view of the case, Government were requested to grant adequate representation to the Association on the proposed Committee.

Bengal Millowners' Association, Calcutta

New office-bearers.—The following office-bearers have been elected for the year 1945.—President: Mr. B. M. Bagri (Kesoram Cotton Mills); Senior Vice-President: Dr. N. Dutt; Junior Vice-President:—Mr. D. N. Bose; Members of the Committee—Mr. R. N. Dutt, Mr. M. L. Shah, Raisahib S. C. Ghosh, Messrs. G. Chakravarti, D. N. Choudhuri, S. K. Basu and S. C. Roy.

Annual General Meeting.—The 11th annual general meeting of the Association was held on Wednesday the 14th February 1945. Mr. R. N. Dutt took the chair.

The following are extracts from the Presidential address:

"The efforts of the Government in bringing down the cloth prices which soared up to great heights in the year 1943 have been attended with a large measure of success. This has been mainly due to the co-operation extended by the industry itself to Government in enforcing ceiling prices. This self-imposed co-operation is all the more remarkable in view of the fact that this industry has sacrificed large profits arising from the inflationary conditions brought about by the war. Against a background of diminishing profits the Indian mills have been extending constant co-operation to Government as a result of which cloth prices to-day have gone down by over 60 per cent. from the 1943 level.

"But the weakest spot in the whole control scheme is distribution. Although drastic measures have been taken by Government in eliminating unsocial elements of the textile trade, the supply of cloth to the consuming public at controlled rates still remains a baffling problem for the Government. I hope that the new scheme of central distribution will prove to be effective and will ensure supplies of cloth at reasonable rates to the public.

"So far as the distribution of cloth and yarn by the Provincial Government is concerned, I would like to point out that the process of releasing frozen goods has proved to be very slow in practice as a result of which considerable congestion has taken place in the godowns of the dealers. It is hardly necessary for me to point out that in the existing situation of acute scarcity a quicker method of disposal of the frozen goods should be adopted. I would also urge upon the authorities concerned to rely more on the mills and to leave at least 20 per cent. in their discretion for distribution amongst the consumers direct.

"The transport situation both inside the province and outside remained serious, causing considerable difficulty in the movement of goods from the mills to the consuming centres and aggravating the shortage of cloth. In addition to this, restrictions were placed from time to time on the movement of cotton from the Punjab and Sind, which, as you are all aware, are the main supply centres for cotton consumed by the Bengal mills. Similar restrictions were also imposed on the movement of textile products from Bombay to Calcutta by rail. These transport difficulties were to a large extent, if not mainly, responsible for the acute shortage of cloth which is prevalent in this province. As if all these were not sufficiently serious, the railways have, by a notification dated the 15th December 1944, imposed increased freights on fullpressed raw cotton despatched to Bengal from stations on the North Western Railway. Your Committee took up the matter with the railway authorities as well as the Government of India and addressed several communications urging upon the authorities to withdraw the increased rates forthwith. I am glad to state that as a result of representations made by your Committee, the railway authorities have withdrawn the notification by which increased freight rates were introduced on cotton despatches to Bengal.

"The coal situation deteriorated considerably at the end of the year and several mills were on the verge of closing down altogether. Repeated representations have been made to Government in this matter but unfortunately owing to fall in the output of coal, no hopes can be entertained of an early solution of this problem.

"It is hardly necessary for me to point out that this industry which has been subjected to high pressure entailed by the necessity of supplying war requirements, will be in need of heavy replacements during the post-war period. It has been reliably estimated that for profitable operation in the post-war period nearly 50 per cent. of the spinning and weaving machinery will have to be replaced. It is not difficult to visualize that there will be a great scramble for securing machinery on account of the fact that these replacements are also needed by other countries like the U.K., and U.S.A. In these circumstances it is obvious that a large amount of Government assistance will be necessary to enable the textile industry of this country to secure the necessary machinery and other replacements. In view of the fact that this industry has co-operated with the Government to its maximum capacity during this war in supplying vast Defence requirements, I consider that it is only reasonable for the industry to look forward to the Government for active help in the matter of securing urgent replacements in the post-war period.

"As far as the province of Bengal is concerned it is well-known that the number of mills working in the province are not sufficient to cope with the textile requirements of the population. I do not think it is necessary for me to point out the acute hardship felt at the present moment by the civilians in obtaining their supplies of textile requirements at reasonable prices. In these circumstances I appeal to Government to encourage the expansion of the industry in this province by providing all facilities for starting new mills in this province as well as helping the old ones in obtaining the required machinery for expansion and replacements."

Marwari Chamber of Commerce, Calcutta

Third Quarterly Meeting.—The following is an extract from the presidential speech of Mr. R. N. Bhojnagarwala, Vice-President of the Chamber, delivered at the third quarterly general meeting held on Saturday, the 10th February, 1945:—

"Various suggestions with regard to the modification of the E.P.T. have been made to alleviate the crushing burden of taxation on the industry on the lines of what has been done by the Government of other countries. The suggestions include (*a*) that the expenditure incurred for reconverting the industry to peace basis should be allowed as an expenditure, (*b*) that special sums for repairs and renewal which could not be undertaken because of the war should be allowed as a deduction from the E.P.T., (*c*) that the losses in value suffered by the mills in respect of plant and equipment provided as a part of the war efforts should be allowed as a deduction. Besides these, it will also be proper if in view of the promising situation of the war, the War Risk Insurance Ordinance is modified so as to make it less burdensome on the finances of the factories concerned. Already, a huge surplus out of the premia has been built up with the Government. It will, therefore, be fair if some relief is given to the factories in the shape of granting them exemption from the payment of premium for the next year, and thus extend the period of risk to cover the last premium paid as has been done in Australia."

Karachi Chamber of Commerce, Karachi

Textile Imports Price Committee.—Mr. N. A. Tombazi was appointed by Government as a member of the Textile Import Price Committee, Sind.

Joint Adjudication in Trade Disputes.—The Chamber considers that the Government should not include other undertakings in an adjudication that had already been set in motion in another case, if the matter under dispute in the former case had already been submitted to adjudication. Further, the option of being included in the adjudication proceedings relating to another undertaking should rest with the employers.

Cotton Seed.—On the initiative of a member firm the Chamber addressed the Director of Agriculture in Sind on the subject of import of cotton seed from the Punjab for sowing in Sind.

The Agricultural Department had in the past ten years or so encouraged the sowing of two varieties on the Indus left bank, and one on the right bank. Of the former, one, Sind Sudhar, had gone completely out of favour with everybody. It was a poor yielder and therefore the zamindars did not like it. Its ginning outturn was almost a seer per maund *kapas* lower than that of any other variety, which made it unpopular with factory owners, and finally, the quality of its lint had steadily deteriorated over the last few years and mills were no longer keen on it. The other variety, M4, was introduced more recently and was a better yielder and gave a better ginning percentage, but it also had fallen off in quality in the past two or three seasons. While the Committee did not suggest that its cultivation should be abandoned entirely, they did not consider it desirable that only this variety should be grown throughout Sind.

The Chamber observed that the variety grown in the right bank areas, namely, 4F 98, had steadily deteriorated in quality in past years, and at the moment hardly commanded a premium over ordinary 4F. Some years ago, a test at the Matunga Laboratory was made to compare the spinning value of this variety with that of Sind Sudhar, and the result of this test showed very little difference between the two. The fact that its price had sunk to that of 4F was a measure of its deterioration since then. The Agricultural Department did nothing during the past few years to check this decline by making pure seed available to zamindars, and finally during the current season they had abandoned the variety and encouraged the sowing of M4 on the right bank as well. However, this had not so far prevented 4F 98 being sown in this area on a larger scale than all other varieties put together.

The Committee pointed out that upto a few years ago there was little difference in quality between Sind and Punjab 289F, but that of late years the difference had become more and more marked each year, and this was reflected in the prices of the two varieties, the discount on Sind as compared with Punjab being greater than ever before.

One of the most progressive cotton growing estates in Sind proposed to discontinue M4 entirely because they felt it was unsuitable and had found that the quality was deteriorating every year. At the moment there was a difference of about Rs. 6 per maund between the price of M4 and Punjab 287F (roller ginned) in favour of the latter, and when sawginned the difference was about Rs. 10.

As the Agricultural Department were clearly not in a position to supply pure seed of good varieties for sowing on anything like a sufficient scale to satisfy the demands of Sind growers, the Chamber submitted that the import of pure seed from the Punjab and Bhawalpur State should not only be permitted, but also encouraged and arranged.

(*Continued on page* 434.)

Factory Environment in England

ON the advice of the Industrial Health Advisory Committee, the Factory Department of His Majesty's Government in the United Kingdom has set up an Information Service concerning scientific and technical developments bearing on industrial health problems. The latest Annual Report (for 1943) of the Chief Inspector of Factories, Sir Wilfrid Garrett, thinks that the post-war planning of "communal factory buildings," blocks of well-designed rooms of convenient sizes for heating, ventilation, lighting, cleaning, maintenance, etc., to be let to small factory occupiers may lead to great improvements in certain trades. Such new tenement factories could have modern layout, power, hoist and other labour-saving devices, communal canteens, and so on.

Ventilation

For many factory buildings, the Chief Inspector suggests natural ventilation can give satisfactory ventilation. The possibilities should be carefully explored instead of the tendency to unnecessary recourse to fans. Ventilating engineers too often regard the ventilation, by fans, as the means of removing dust or fumes. Local exhaust for dust and fumes and general ventilation ought to be clearly distinguished, dust and fumes being removed as far as possible at the source.

Lighting

In 600 factories employing 30 to 250 persons general lighting was adequate in 60 per cent., though with faults of glare in some. Intensities of general lighting were often found much in excess of the minimum, frequently 12 foot-candles and even 20 to 25 foot-candles. In 18 per cent. of the factories major improvements in lighting are required, and in an additional 42 per cent. needed improvements could be made without much expenditure or labour; in most of these cases very little work is done except during daylight hours. Glare due to unscreened lamps remains the most prevalent defect. Cleaning and maintenance are still often neglected; light meter tests on the work would often show a waste of 50 per cent.

Personnel Management

The idea of Personnel Management and Welfare as something additional or extraneous, dealing with the trivial amenities, dies hard. The welfare work itself may be kept in watertight compartments. One welfare supervisor said she did not have meals in the canteen as she was particular about her food ! In more than half the factories the head of the Personnel Department has not normally direct access to the Directorate but has to put his plans and recommendations through someone else, usually the Works Manager. In some cases the Personnel Manager is immersed in detail and becomes an office man with no real personal contact with the employees.

One Personnel Manager reported that the adoption of adjustable chairs with back-rests, instead of stools, increased production by 7 per cent.

Examples are quoted of the influence of good personnel and welfare supervisors in reducing absenteeism.

Improvement of Mill Conditions

A committee has been set up by Sir Wilfrid Garrett, H.M. Chief Inspector of Factories, to inquire into and report on working conditions in cotton mills and to co-ordinate projects for improvements, under the chairmanship of Mr. G. B. Barnett, Deputy Chief Inspector of Factories, with other Home Office representatives, and four representatives each from the employers' and operatives' sides of the industry, and Dr. F. C. Toy, Director of the Shirley Institute. At the first meeting on 20th November four sub-committees were appointed to investigate dust in cardrooms; ventilation, lighting, and general amenities; the reduction of noise, air conditioning, and the wider spacing and the fencing of machinery; and mule spinners' cancer.

The Chief Inspector of Factories has appointed an informal technical committee to consider methods of improving conditions of work in the jute industry.

* * *

The World's Strongest Fibre

THE strongest fibre in the world was used in the recent airborne operations. Its name—"Fortisan," its origin—the same basis as the well-known "Celanese." So far it has not been in civilian life. Right from the early days of the war it has been devoted to Services purposes. In the airborne operations as parachutes it is carrying the tremendous load of supplies—and requires the minimum of bulk and power for its own transport. It is most striking that such diaphanous and really beautiful material can carry such formidable loads. It also produces the lines for suspending the loads as well as for use in barrage balloons. Owing to its super strength its filaments can be made as fine as a spider's thread. Then the electrical industry claims it for some of its newest developments. In the development of radio and electronics its super fineness of filament, coupled with strength and high heat resistance, is contributory to the rapid extension of new or improved designs in electrical apparatus.—*Fibres, Fabrics and Cordage.*

TRADE LETTERS

(*From Our Special Correspondents*)

New Delhi

THERE is a great shortage of cotton cloth at present in the Capital and big crowds besieging the retail shops is a daily sight; I am told only a few persons can manage to get a small quota. The shortage was anticipated in view of the temporary closure of some Ahmedabad mills due to coal shortage and the fact that present production of cloth is only about four-fifths that of pre-war civilian consumption. The hardship of the man-in-the-street in respect of clothing for summer is as great as it was for winter clothing and there is a general feeling that the present cloth famine which is widespread calls for urgent action and a new policy on the part of the Central Government. There were several questions in the Central Assembly regarding cloth control and distribution during the last few days and the Hon. Member-in-charge has promised a new scheme. There has also been a non-official demand in the House for allocation of more yarn for the handloom industry.

Professor A. V. Hill's Visit

Professor A. V. Hill, who was out here on a scientific mission last year, has published a report thereon entitled " Scientific Research in India " which is just to hand. The report embodies notes and suggestions originally submitted confidentially to the Government of India. Professor Hill makes many useful and constructive suggestions and these are now under consideration by a committee set up by the Government of India under the Planning and Development Department. The main feature of the Hill report, however, is the recommendation that " *A Central Organization for Scientific Research* " be established in India as early as possible after the war. This central body, working under the Hon'ble Member for Planning and Development, would formulate a common policy for research. Professor Hill also makes a strong plea for scientific liaison between India on the one hand and the U.K., U.S.A., and Russia on the other and the establishment of Indian Scientific Offices in London, Washington and Moscow. He has stressed the need for increased facilities for sending suitably qualified Indian students for advanced research and training abroad. So far as the textile industry is concerned, Professor Hill has nothing particular to say. One may hope, however, that with scientific research in India reaching full stature in the post-war years, the millowners will not lag behind in the effort to make the maximum use of the results of technical research.

I had an informal talk the other day with Sir Shanti Swarup Bhatnagar at the Secretariat. One of the first things he told me, referring to his recent visit to the U.K. and U.S.A., as leader of the Indian Scientific Mission, was about the wonderful mass-production methods of American industry. In textiles, American cloth is of fewer varieties as compared with the British product but, where cost and production are concerned, Britain compares very poorly indeed with the U.S.A. Moreover, textile machinery development was more advanced in the U.S.A. than anywhere else and, in fact, a committee was set up in Great Britain to consider this subject, and as a result of its findings, it has been decided to scrap the old-type Lancashire machinery and to replace it with newer machines on the American model. India's post-war industrial development had to depend, Sir Shanti remarked, on essential imports of machinery, at least in the initial stages, especially for instance in the setting up of hydro-electric power plants, and her requirements would have to be met mainly by Britain. It was Sir Shanti's impression that American " big business " had little interest in Indian industrial development and that it was up to us to develop a strong national industry.

Ahmedabad

THE system of distribution of cloth which has been applied to Bombay for the last three months has been extended to Ahmedabad from March in order to deal more effectively with black marketing. Permit-holders appointed by the various Provincial Governments are arriving here to make purchases from the quota-holders who receive cloth from the mills. Hitherto the Maskati and Panchkuwa Cloth Markets' Dealers' (Quota-holders') Associations were distributing cloth from the quota-holders to their quota-holders in the consuming centres. No such system was working in Bombay where quota-holders (wholesale dealers) were free to sell cloth to whomsoever they liked.

This encouraged black-marketing considerably, and in order to stop it, Government directed quota-holders of Bombay to sell cloth only to permit-holders appointed by the various Provincial Governments. This system has now been applied to Ahmedabad where up-country quota-holders have been replaced by permit-holders, but the agency of the Maskati and Panchkuwa Markets' Associations for the distribution of cloth has been retained by Government.

It is the general complaint of the merchants that the new permit system evolved by Government is disrupting the old trade channel in the consuming centres while it has been retained in the producing centres. Permit-holders appointed by the various Provincial Governments are inexperienced and are quite new. They are ignorant of the sorts of cloth they come to purchase. They have to take the help of local merchants. If the old trade channel is disrupted in the Province, the industry will suffer during the post-war period after cloth control is removed. The new permit-holders will not be able to handle Indian mill cloth in the face of fierce foreign competition.

I understand that the representatives of the trade and industry are to take up this matter at the next meeting of the Textile Control Board, to which Government have pledged to retain the old trade channel as far as possible. The quota-system devised by Government was intended to retain the old trade channel, and there is no reason why, it is contended, the new permit system should seriously disturb the old trade channel to the lasting disadvantage of the industry. The old trade channel which has served the industry for years through thick and thin, once disturbed, cannot be restored so easily. The Central Government that has already recognized the importance of the old trade channel will therefore be earnestly pressed to impress upon the Provincial Governments its importance and to exercise its authority to restore it wherever it has been replaced.

With the introduction of the permit system, the deficit and the surplus areas are to be put on a level of equality with regard to the supplies of cloth. The Bombay Province, which is a surplus area, is to receive cloth on the basis of 18 yards per head as against 10 yards for Bihar, 18 yards for the Punjab, etc. The distribution of cloth is to be rationalized and not rationed according to the Textile Commissioner, on the principle of "equality of sacrifice" of the consuming centres. A feeling of uneasiness prevails among the surplus areas, but they should look to the plight of the deficit areas where cloth famine prevails. There is no other remedy to relieve the cloth famine except to put the surplus areas on an equal level with the deficit areas. As the distribution system is perfected all Provinces will feel equally the pinch of cloth famine, which only the deficit Provinces at present experience more acutely.

Khadi Production must be Increased

After distribution comes production. There is a limit to which mill production can be increased, though recently it has been reduced by coal shortage. But there is no limit to the increase in the production of *khadi*. It is regrettable that no comprehensive scheme is being prepared to step up production by the handloom. India has still to pass about three years of cloth famine which she can utilize to build up her textile industry so as to stand the post-war depression better than she did after the end of the last war. Government control has saved the industry from the sudden crisis which befell the industry immediately at the end of the last war. The industry has been subjected to voluntary cuts which has reduced abnormal profits to normal levels. No more cuts are to be enforced but distribution is to be regulated. The industry which would have been tossing up and down has been steered through calmer waters which would not imperil its existence when there is the ebb after the war. Hand spinning and hand weaving industry would have profited equally if a serious attempt had been made to revive it all over the country. Even now it is not too late.

Textile Labour Association

The Textile Labour Association is coming to grips with the Ahmedabad Millowners' Association on the three main issues—bonus for 1944, compensation for stoppages due to coal shortage and better conditions for night-shift workers. These three issues have been referred to the Conciliator for conciliation which is compulsory under the Industrial Disputes Act passed by the Congress Government when it was in power in Bombay. One of them—the bonus question—has failed to evoke an agreement, and the Labour Association has demanded arbitration thereon. If the Millowners' Association refuses it, the Labour Association will declare a general strike. But the Government is not likely to allow a general strike in an important industrial centre like Ahmedabad. The Governor of Bombay interfered when a general strike was imminent on the question of dearness allowance on the outbreak of war, and he persuaded the Millowners' Association to accept the arbitration demanded by the Labour Association. History may repeat itself on the three main issues in dispute between the two bodies which will be ultimately referred to arbitration.

The Labour Association, however, has gone a step further this time, and has demanded a sort of agreement with the Millowners' Association to refer all disputes in future to arbitration. A permanent system of arbitration such as existed in Ahmedabad before the passing of the Industrial Disputes Act is aimed at by the Labour Association. The Millowners' Association refused to accept arbitration as soon as the Industrial Disputes Act made it voluntary. The Millowners' Association which once accepted the system of arbitration for the settlement of all disputes under the inspiration of Mahatma Gandhi who resorted to a fast was long smarting under the series of awards which the working of the arbitration system created in Ahmedabad. These awards imposed a strain on the mills which were repeatedly called upon to enforce them. The mill agents who had never before felt the authority of a human agency resented the authority of the arbitrators perpetually hanging over their heads. One of the arbitrators was Mahatma Gandhi himself, to whom they were forced to run every now and then. Mahatma Gandhi gradually extracted from them the highest wages in India and other concessions which they found too costly for them to bear. They consequently took the first opportunity to free themselves from the shackles of the arbitration system which the Labour Association seeks again to impose on them.

They will undoubtedly put up a tough fight, but war is not the time for a fight with labour. They have put up with many inconvenient things during the war such as the highest dearness allowance on the top of the highest wage scale in the country, and they will put up with one more inconvenience of arbitration system, but they will make determined efforts after the war to ease the burdens imposed on them under the stress of war.

Local labour leaders who have been conducting the Labour movement on the principles of Mahatma Gandhi for over two decades, have formed an all-India body called the Hindustan Mazdur Sevak Sangh to guide labour movements on similar lines in all industrial centres in the country. Mr. Vallabhbhai Patel is the President and Mr. Gulzarilal Nanda, Secretary of this body. It aims at "not only the advancement of the legitimate interests of the workers, but also the true well-being of the entire community," and "will devote its attention to the moral and cultural uplift of the workers and development of their character, as well as to the improvement of their material condition." It will resort to direct action only when the application of the principle of arbitration on fair lines is not available. The local Labour Association has been conducted on these principles, and they are now sought to be worked out in other industrial centres. Will they precipitate a conflict with other trade unions that are already working on different lines in the country?

Cawnpore

Post-war Schemes

ADDRESSING the annual general meeting of the Merchants' Chamber of the United Provinces, Sir Maurice Hallett, Governor of the Province, gave an account of the various steps that have been taken by the Government to ensure a smooth and orderly transition of the economy of the Province from war-time footing to peace-time stability. "The ultimate aim of our post-war plans is to raise the standard of living and increase the general prosperity of the country," he observed, but "the immediate object is to make the switchover from war to peace production, and to provide for the lakhs of men who will be demobilized from the fighting forces, and from war industries." He announced that the Government was planning to spend Rs. 125 crores on post-war development schemes during the first five years after the termination of the war.

Mr. Uma Shanker Mehrotra, the President of the Chamber, delivered a comprehensive address reviewing the commercial and industrial progress made by the Province in recent times. He congratulated the Government on "the very wise financial policy pursued by them which has culminated in the strength and expansion of the Provincial finances in such a manner that the post-war schemes of the Province could be started on an even keel without unduly straining the progressive development of the province, and without having recourse to such extra burden of taxation, as would deepen the slump and make the province poorer."

Mr. Uma Shanker Mehrotra was elected President, and Lala Lakshmipat Singhania of the J. K. Group of Mills, Vice-President.

Cloth Control

The cloth situation in the Province has very much deteriorated. As reports in the Press go to show, there is a virtual cloth famine in 34 districts of the Province. As a consequence of the operation of the new cloth distribution scheme, Bombay and Ahmedabad cloth mills are to supply cloth to U.P., but supplies from Ahmedabad have not arrived as yet which has resulted in great dislocation of the entire trade. The Government have also cancelled the United Provinces Standard Cloth Control Order, whereby the need for obtaining a separate licence to deal in this have been removed. Cloth dealers licensed under the U.P. Cotton Cloth and Yarn Control Order can now deal in standard cloth provided that prices charged for the cloth do not exceed the maximum retail prices fixed by the Government from time to time.

The Government have, it appears, prepared a new scheme for the distribution of yarn to weavers. A recent Government notification requires dealers in yarn to furnish to the Government and to District Magistrates figures of total sales of mill-made yarn and sales to consumers only during the years 1940, 1941 and 1942 in the prescribed form. Dealers have been advised to submit the returns at a very early date. Two new cloth control orders have also been recently issued by the Provincial Government:

(1) No wholesale dealer within the limits of Cawnpore Municipality shall sell or deliver any cotton cloth received by him from Ahmedabad except to persons specified by the Deputy Secretary, Civil Supplies Department.

(2) Every such wholesale dealer shall, within three days of the issue of this Order, deposit with the Additional District Magistrate, Cawnpore, a list showing the quantity and description of the goods which he has received from Ahmedabad.

It is announced that under the latest provisions of the Cotton Cloth Movements Control Order no person is permitted to take more than 20 pounds of cotton cloth (excluding cloth made up into garments) as personal luggage by rail from U.P. to any other province except Bihar, Bengal and Punjab.

Calcutta

Post-war Stabilization of Bengal's Industries

THE Bengal Provincial Indigenous Manufacturers' Conference have decided to call upon the Government of India to define their policy clearly in relation to post-war stabilization of such concerns as had, despite risks and difficulties, played an efficient part in implementing the war programme. The Central and Provincial Governments were urged to purchase indigenous materials even in such cases where they might not be absolutely equal in quality or price (not exceeding 5 per cent.) to imported materials. This arrangement should continue at least for two years at present. The Conference further decided to urge on the Government to formulate and immediately give effect to such fiscal measures as might be truly calculated to strengthen and consolidate the position of Bengal industries *vis-a-vis* possible foreign inroads in the post-war period.

Sales Tax on Khaddar

Exception is being taken in representative quarters to the proposal for imposition of sales tax on khaddar. It is argued that millions of people depended for their livelihood on khaddar and they are mostly men of very poor resources. In these days of cloth shortage not a small number of people depend absolutely upon khaddar for their wearing. To impose sales tax on khaddar would be a tremendous hardship both on the producers and consumers of khaddar.

Future of Trade and Industries

Matters of far-reaching importance were discussed in the meeting of the All-India Manufacturers' Organisation presided over by Sir M. Visveswaraya. The efforts of the Government towards economic planning were welcomed but it was felt that the measures taken were not at all commensurate with the country's requirements and potentialities. The Government were urged to scrutinise carefully and give effect to the long-term plan of the Bombay industrialists and the Manufacturers' Organization which aimed at trebling the national production by fostering intensive development of industries and modernization of agriculture. It was suggested that Government should constitute for this purpose three bodies—a Reconstruction Commission, an Economic organization comprising a separate Central Department of Industries and a National Reconstruction Board.

Distribution of Yarn

It is understood that a programme for distribution of yarn to weavers in Bengal has been drawn up on the basis of 6,000 bales of yarn being available per month for the whole Province. As this supply is inadequate, the Government of Bengal are reported to have taken up the question of larger supply of yarn to Bengal with the Textile Commissioner. At the instance of the Minister-in-charge, Mr. S. C. Roy, Chairman of the Bengal Textile Advisory Committee, entered into negotiations with the Government of Madras for the supply of yarn and succeeded in arranging a supply of about 10,000 bales every month. Even these supplies were not sufficient to meet the requirements of the Province. The position, it is understood, has now become far worse following the recent conference held by the Textile Commissioner at which it was decided to scale down Bengal's quota, which will henceforth be 5,442 bales of yarn per month. Owing to the prevalence of black market in yarn the Government of Bengal are freezing all yarns available in the Province and are arranging for supply thereof in the subdivisions to the weavers on the quota basis, non-spinning weaving mills and a few miscellaneous fabricators. Under the new distribution programme the allocations made to the different centres are so small compared to their needs that, it is apprehended, a substantial section of weavers are likely to go out of employment unless larger supplies are assured to Bengal.

Comments on the Scheme of Government

The view that the Government distributive machinery has been a total failure and that maldistribution on the part of the Government has been responsible for such a crisis to the detriment of the weavers, has been expressed by the Calcutta Yarn Merchants' Association in the course of a communication to the Provincial Textile Controller. The apprehension of the Association is reported to have been strengthened by the fact that approximately 10,000 bales of yarn are lying in the market undelivered. The Association has requested the Government to make immediate arrangements to send these goods to the mofussil area.

Creation of the Jute Fund

The Indian Central Jute Committee have decided to approach the Government of India to create a Jute Fund, to allocate to it a rupee per ton out of the existing export duty on jute and jute goods, and to place the entire proceeds of the fund at the disposal of the Committee. It has also been decided to undertake investigation of the possibilities of manufacturing jute or jute-cotton-union fabrics as the Technological Laboratories of the Committee have succeeded in spinning fine yarn from jute.

Jute Industry in Retrospect

Presiding over the annual general meeting of the Indian Jute Mills' Association, Mr. W. A. M. Walker reviewed the position of the trade and industry during the last one year and observed that the jute mills, in support of war efforts, were producing a wide range of by-products,—from parachutes to tea chests and from five-gallon drums to aerodrome runways. Throughout the year, except for one very short period, jute prices had been well maintained and even though it was likely that these prices would be maintained for another year he warned that the growers must be ready at the same time for the future when the generally expected fall in prices of all commodities will materialize. Despite coal difficulties, manufactures during the last year totalled 1,050,000 tons or 150,000 tons below the target figure of 100,000 tons monthly. The coal situation had been so acute that, according to the President, some mills in the Association worked only for five weeks out of the past seven months. The Association was disappointed to find that even though it was promised that better supplies would be available whenever production was increased and that it would have the first claim on increased raisings, the assurance was not honoured by the Supply Department. The Chairman urged that it was a very unhappy state of affairs and called for immediate action by the Supply Department. Stocks of manufactured goods stood on 1st January 1944, at 221,304 tons and on 31st December at 169,012 tons so that they had disposed of 1,102,000 tons during the year.

Fixation of Jute Acreage and Prices

As a result of the discussions of the representatives of the Government of Bengal with the Government of India, important decisions have been reached and just announced. They are:—

(*a*) The Bengal Government will, as in the previous year, issue orders for the licensing of an acreage of eight annas on the basic average of 1940 and will advise and encourage the agriculturists to plant fully upto the acreage in their own interests. (*b*) The India Government will guarantee a minimum price of raw jute on the basis of Rs. 15 per maund of middles at Calcutta and at the appropriate parity price at the selected principal jute purchasing up-country centres, details of these selected centres and the minimum parity prices being announced later on. (*c*) The India Government will undertake to buy all crop offering, old and new, at Calcutta and selected up-country centres and in Bengal with a view to maintaining prices at minimum level at Calcutta and at the appropriate parity prices in the selected up-country centres. (*d*) The India Government will fix a minimum price of raw jute on the basis of Rs. 17 per maund of middles at Calcutta (other qualities or grades of raw jute to be in parity with this price) with the right of the India Government to requisition on the basis of the maximum price. The Government of Bengal will assist in such requisitioning from middlemen if necessary. (*e*) The Jute (Price Control) Order, 1944, fixing maximum selling prices for manufactured jute goods will remain in force. (*f*) This agreement will remain in force between the two Governments till 31st March 1946.

Labour in Jute Mills

That labour in the jute mill industry remains on the whole in a comparatively contented state is emphasized by the Chairman of the Indian Jute Mills Association. The industry claims to have all along taken steps to meet the conditions imposed upon labour through shortage of food supplies and high prices and in pursuance of this policy the cash allowance has recently been stepped up from Re. 1-4 to Rs. 2 per week, the additional cost to the industry being nearly Rs. 1,15,00,000 per annum. The Labour Officers' Scheme has functioned successfuly during the past year and the Special Labour Committee of the Association has decided that the most important problems to be given prior consideration should be the setting up of conditions of service for all workers, the preparation of a scheme for the provision of pensions or gratuities to workers after retirement, standardization of wages and establishment of personnel departments in all mills. This was to be regarded as the immediate short-term policy of the industry in relation to labour. It was further stated that conditions of service have now been drawn up and, subject to favourable comment from the Provincial Government, it was hoped to introduce these on 1st April.

Tibet's Share from Bengal's Quota

The Government of Bengal, it is understood, are freezing a large quantity of textiles out of the quota fixed for Bengal for supplying the same to Tibet. This, it is further reported, the Provincial Government are doing in pursuance of instructions given to them by the India Government. So far about 400 bales of textiles have been secured for Tibet for which country the Government of India is said to have fixed the quota.

Spinning Mills for Bengal

The Bengal Minister for Industries has revealed that the Government are contemplating to set up two spinning mills in the province for supplying yarn at cost price to handloom weavers as a remedial measure to meet the scarcity of the yarn. It has further been stated by the Minister that they have also accepted a scheme for opening Government depots in each district for direct supply of yarn to weavers and for organizing marketing of their products and that a Deputy Director of Industries will soon be appointed for that purpose.

Returns of Yarn Consumption

In order to ensure that Bengal may get her quota of yarn the Textile Commissioner has requested the Government of Bengal to supply him with the following information:—(*a*) Total number of handlooms installed in the province upto 30th September 1939 and upto 30th September 1944. (*b*) Total number of power looms not situated with or forming part of a complete mill with spinning plants in operation in this Province upto 30th September 1939 and upto 30th September 1944. (*c*) Total number of hosiery machines installed in Bengal upto 30th September 1939 and upto 30th September 1944. (*d*) Consumption by weight of yarn for all other miscellaneous purposes for the year ended 30th September 1939 and for the year ended 30th September 1944. (*e*) Estimate of total monthly requirements of yarn for all the above categories at present, details being given of counts, both single and folded, within groups varying between 1s and 61s and above. (*f*) Estimated monthly production of cloth in lbs. and in yards based on (*a*) above and estimated monthly production of cloth in lbs. and in yards based on (*e*) above.

Bengal Cotton Cloth and Yarn Control Order

The Bengal Civil Supplies Department has announced that all existing licences under the Bengal Cotton Cloth and Yarn Control Order, 1943, that are due to expire on the 31st January 1945, have been, for administrative reasons, extended till 31st March 1945 by a recent order passed by the Government under D. I. Rules.

Textile Business in Bengal

Plans for equitable distribution of cloth and yarn were discussed by the Provincial Textile Advisory Committee. The Chairman of the Committee referred to the extreme shortage of cloth and yarn in Bengal, the difficulties that stood in the way of equitable distribution and suggested that to secure proper distribution it might be necessary to eliminate the large number of unnecessary links in the trade channel.

The efforts of the Government are, however, discounted by the Calcutta Piecegoods Merchants' Association who are of the opinion that in view of the fact that a number of notifications and circulars have been or are still issued by the Provincial Textile Controller in respect of the textile business it would have been but meet and proper if the merchants and the chambers were consulted at the outset regarding the propriety and feasibility of the new directions. According to the Association, the requisition policy adopted in the middle of September last in respect of goods of finer counts has given rise to the black market much to the detriment of the wholesale dealers and the consuming public.

Cotton for the Bengal Mills

The cotton mills in Bengal have to depend entirely on the Punjab and Sind for their cotton requirements. Very great difficulties are felt by them in getting the supply of cotton due to transport difficulties. To add to these difficulties, the N.W.R. authorities have now increased the freight for full-pressed raw cotton despatches from stations on that railway to Bengal with effect from 15th December 1944. The reasons for this increase in freight are not known but it is strongly opposed from all quarters in Bengal. It is argued that India's textile mills are functioning under an all-India control, that the prices of yarn and cotton and cotton textiles are controlled on an all-India basis and that there are fixed ceiling prices. If the imposition of increased rates is supported by a corresponding enhancement of the ceiling rate there is nothing to say. But if it means an additional burden on the Bengal mills it will look like discrimination against the Province's textile industry. The Bengal Millowners'

Association have made due representations to the Government of India.

Millowners Meet

Presiding at the annual meeting of the Bengal Millowners' Association, Mr. R. N. Dutt referred to the hardships of the civilian population in obtaining their supplies of textile requirements at reasonable prices. He said that the weakest spot in the whole control scheme was distribution and that although drastic steps had been taken by Government to eliminate undesirable elements from the textile trade the supply of cloth to the consuming public at controlled rates still remained a baffling problem for the Government. So far as the distribution of cloth and yarn by the Provincial Government was concerned the process, he emphasized, of releasing frozen goods had been very slow in practice, resulting in considerable congestion in dealers' godowns. He suggested that in the existing state of acute scarcity a quicker method of disposal of frozen goods should be adopted and that the authorities should rely more on the mills and leave at least 20 per cent. to them for distribution among the consumers direct.

South India

Government Urged to Take Over Mill

THE Madras paper, the *Mail*, says that a deputation of local labour leaders waited on the Hon'ble Sir A. Ramaswami Mudaliar, Supply Member, Government of India, on 9th February 1945 and represented the need for the Choolai Mills, Madras, being taken over, either by the Government of India or by the Madras Government, at least for the duration of the war. The deputation pointed out that, while the Supply Member urged that more cloth should be produced to meet the demands of the people, one of the biggest mills in the city of Madras, the Choolai Mill, was idle. There were 40,000 spindles and 700 looms in the mill and they were kept in good working order by Mr. Indira Singh, of Calcutta, who bought the mill for Rs. 22 lakhs. It was up to the Government to take it over and run it as in Bombay, where the Provincial Government had taken over 10 mills.

The Supply Member gave a patient hearing and promised to take up the matter in the Executive Council. Meanwhile, he asked the deputation to send a memorial to the Commerce Member. It may be stated that a deputation has also proceeded to New Delhi to interview the Commerce Member.

Cochin Cloth Merchants

Appreciation of the working of the Piecegoods Merchants' Association, particularly the harmonious relationship between the Association and the textile control authorities in Cochin State, was expressed by Sir George Boag, Dewan, presiding over the first annual meeting of the Association at Ernakulam. He congratulated the Association on its successful working and was glad that they had realized the need of control in an emergency like the present. He agreed with them that clothing was as necessary as food, and its production and distribution was important. The greater part of the work done by the Association during the year was carried on in a friendly spirit which had brought about a better and more harmonious working of the control regulations.

The Dewan agreed with them that the control orders should be published in the local vernacular.

Success of Textile Control in Madras

"I find that Madras has acquired a good reputation all over India for the manner in which her people and her Government carry on their business," said Mr. S. V. Ramamurthi, Adviser to H.E. the Governor, inaugurating the Madras Retail Piecegoods Merchants' Association on 25th January in Madras. Mr. Ramamurthi also stated that the Government of Madras had taken up the question of revising the quota of cloth for the province.

After thanking the members of the Association, Mr. Ramamurthi said: "It is satisfactory that in this province the production and distribution of yarn and cloth, wholesale and retail, are being organized, in a manner which helps all concerned. This position has not been reached without unremitting care and effort on the part of the Provincial Textile Commissioner and his staff and it continues to need all their vigilance and energy."

Till about the middle of August last there was quite a serious amount of black-marketing in yarn in this province and movements of yarn unrelated to the demands in the various weaving centres were taking place, with the result that it was difficult to secure steady supplies of yarn at controlled prices even in the large markets. The Provincial Textile Commissioner had, therefore, to introduce comprehensive control of the distribution of yarn. This scheme, called the District Quota Scheme, has been in operation from the latter part of August last. If we have not secured 100 per cent. success under this scheme as regards steady supplies, it is largely because of railway transport difficulties.

On the whole it can, however, be claimed that, thanks to this control of distribution from the mills downwards to the retailers, black-marketing in yarn has practically disappeared. No area can get more yarn than the Provincial Textile Commissioner has allocated to it, and there is complete control over what every dealer buys and sells, the requirements of each consumer of yarn being distributed as under a rationing scheme. A scheme for the regulation of despatches of yarn and piecegoods from Coimbatore is being introduced by the Provincial Textile Commissioner and this is expected to improve considerably the position as regards movements of yarn to the various weaving centres.

The Tamiland Provincial Handloom Weavers' Conference was held at Karur on 29th January under the presidency of Prof. N. G. Ranga. In the course of his presidential speech, Prof. Ranga adverted to the advice given by Sir A. Dalal to Madras capitalists to start more weaving mills and observed: "This attitude of the Government must be countered by all who are interested in the welfare of our weavers."

Restrictions on Cotton Cultivation

The following Press note has been issued by the Madras Government. The Government have prohibited the cultivation of Buradapathi (Sannapathi) cotton completely in Vizagapatam District.

They have also prohibited the cultivation of *mungari* cotton in the districts of Bellary, Anantapur, Kurnool and Cuddapah and of Cocanada cotton in the Guntur District except as a mixed crop in the proportion of one line of cotton to at least two lines of food crops.

In order to compensate the ryots on account of the above restrictions on the cultivation of cotton, the Government have now sanctioned the payment of a bonus of Rs. 2 per acre during 1944-45 in respect of lands in which pure cotton would normally have been grown in the districts of Vizagapatam, Guntur, Bellary, Anantapur, Kurnool and Cuddapah and cotton mixed with food crops in Vizagapatam District but for the above restrictions.

The bonus will be paid to the actual cultivator, whether a registered holder or not. If the registered holding is cultivated both by the registered holder and others, the bonus will be apportioned *pro rata* in accordance with the proportion cultivated by each. The grant of the bonus is purely *ex gratia.* In eligible cases the bonus will be paid to the ryot by the Revenue Department without any application.

Fair Price Cloth Shops in Mysore

The Mysore Government have approved of a scheme for the opening of a limited number of fair price shops in the State for the purpose of checking black market in cloth and making readily available to consumers at reasonable prices cloths which are in short supply in the market. Twenty-three shops, of which 6 will be in Bangalore City and 3 in Mysore City and 2 in each of the other district headquarter towns will be opened as soon as possible. Only approved dealers of standing and reliability, who are already in the business, will be permitted to open these shops.

The approved dealers have to give an agreement to run the shops as per circulars and instructions issued, from time to time, by the Additional Textile Commissioner with reference to the limits of quantities to be sold to each individual, minimum stocks to be maintained, rates to be charged, maintenance of accounts, etc. They have also to furnish a security deposit of Rs. 2,000, for the proper running of the shops. In these shops cloth can be sold to consumers only and cannot be resold to any dealer or hawker nor can it be dyed or printed by the dealer. Supplies to the shops will be made generally at about three bales per month and will, as far as possible, include several varieties.

The selection of the shop in each place will be made with reference to the suitability of its location, the experience, standing and reliability of the dealer, and his ability to run the shop satisfactorily, availability of suitable establishment, existence of adequate business contacts, etc. A selection committee will be constituted for each district with the Deputy Commissioner as Chairman and four members. The decision of the Additional Textile Commissioner regarding the selection of the shops will be final.

Starch Manufacture—Travancore

The Travancore Government propose to keep in view the following objectives in the administration of the Tapioca Starch Control Order:—In the first place it is imperative that there should be no deterioration in the present food situation. The action taken by the Government to ensure adequate supplies of tapioca at reasonable rates has helped the State in no small measure to get over the food crisis. The greatest care will be taken hereafter also to see that for the next six months only a comparatively small proportion of the total production of tapioca is diverted to the manufacture of starch. Secondly, it is the intention of the Government that a steady market should be created and maintained for the Travancore tapioca starch. The high quality of the starch exported has, therefore, to be maintained and the starch will be subjected to rigorous tests by experts in order to set a standard and to fix a minimum quantity. A few large-scale factories will also be permitted to manufacture tapioca starch and starch products. The essential character of the industry as a cottage industry will be safeguarded by allotting nearly two-thirds of the purchase quota to co-operative societies and individuals on a cottage industry basis.

Raw Cotton Statistics

The receipts of loose cotton at present and spinning mills in the Madras Province from 1st to 16th February 1945 amounted to 15,125 bales of 400 lbs. lint. The receipts in the corresponding period of the previous year were 10,902 bales; 26,217 bales mainly of pressed cotton were received at spinning mills and 1,194 bales were exported by sea while 8,649 bales were imported by sea mainly from Bombay.

Supply of Yarn to Weavers

Mr. S. Venkateswaran, Provincial Textile Commissioner, Madras, in reply to a memorandum submitted by the Madras Provincial Handloom Weavers' Association on 31st January, has stated that he has issued instructions to Textile Control Officers requesting them to furnish on application by the Provincial Handloom Weavers' Association or any representative local weavers' association information regarding the quantity of yarn (by counts) received in the district during any month. They are further asked to form advisory committees in every district weavers' centre to help them in the preparation of distribution lists of consumers: the committees should be fully representative as indicated in his scheme for controlled distribution of yarn to weavers. The Textile Control Officers have also been asked to issue ration cards to weavers under their signatures if the committees agree to the ration card system. The non-working members of weavers' co-operative societies should be linked up with local retailers just like weavers who are not members of co-operative societies obtaining a certificate from the co-operative society to the effect that these weavers are not working in the society. The weavers who have shifted from famine areas to other districts, when settled with their looms, should be treated as permanent residents of the respective districts and they should be included in the consumers' lists for supply of yarn.

Indian Mill Finance

Working of Textile Companies

Pulgaon Cotton Mills Ltd., Pulgaon

(Agents: Hardayal Nevatia, Bombay)

The working of the Company for the period ended 30th June 1944 shows a profit of Rs. 9,40,687-12-10 after meeting all expenses including interest, depreciation, Managing Agents' commission, dearness allowance and bonus to employees. Out of this sum Rs. 8,95,000 have been appropriated to income-tax, super-tax, E.P.T. and provision for E.P.T. deposit. This leaves a balance of Rs. 45,687-12-10 which together with Rs. 5,002-5-2 last year's carry-over amounts to Rs. 50,690-2. The Directors recommend to distribute the same as follows: Dividend on 40,000 shares at Re. 1 per share, free of income-tax Rs. 40,000; provision for charity Rs. 5,000; and balance to be carried forward Rs. 5,690-2.

During the period under report there was a labour strike in the mill for about 7 weeks, as was the case with almost all other mills of C.P. and Berar. In spite of this strike the result of the working has been satisfactory.

Birla Cotton Spinning and Weaving Mills, Limited

(Agents: Birla Brothers Ltd., Calcutta)

After debiting interest and commission, providing for reserve for taxation, setting aside depreciation and making sundry adjustments, the combined revenue and profit and loss accounts for the half-year ended 31st December, 1943 show a profit of Rs. 8,27,208-0-7, which includes the revenue results of the company's Jaipur branch and Bhatinda depot not transferred to British India. This amount, together with the balance of the previous half-year, shows a total profit of Rs. 15,61,013-4-2, from which after deducting the amount of dividend already declared for the half-year ended 30th June 1943, there remains a balance of Rs. 14,11,013-4-2. The Directors recommend a dividend on 150,000 ordinary shares at Re. 1 per share, free of tax Rs. 1,50,000 and to carry forward Rs. 12,61,013-4-2.

There was a substantial fall in the prices of cloth in the period under report which has affected and will in future affect the financial results of the company.

Jam Shri Ranjitsinghji Spinning and Weaving Mills Co., Ltd., Sholapur

(Agents: Lalji Naranji & Co., Bombay)

During the year ending 30th June 1944 the company has made a profit of Rs. 34,99,053-0-2. Adding to this the balance of Rs. 30,311-15-11 brought forward from the previous year the total comes to Rs. 35,29,365-0-1. Deducting from this, Rs. 77,700 for interim dividend already paid for the half-year ending 31st December 1943 at Rs. 100 per share, there remains a balance of Rs. 34,51,665-0-1. Out of this sum the Directors have set aside:—Towards building depreciation fund Rs. 30,000 ; machinery depreciation fund Rs. 50,000; reserve fund Rs. 5,00,000 and provision for taxation Rs. 27,00,000, leaving a balance of Rs. 1,71,665-0-1 which they recommend may be dealt with as under:—To dividend at Rs. 100 per share on 777 shares of the company Rs. 77,700; bonus to employees Rs. 50,000 and carry to next year's account Rs. 43,965-0-1.

The allocation to reserve fund makes provision for the compulsory E.P.T. deposit with the Government of India which is to be made in respect of the company's year ending 30th June 1944.

The mill buildings, machinery, stock and stock-in-process are insured against risk of fire for Rs. 42,55,500. The same are also insured against war risk. The profits and fixed charges have been insured for the period of 12 months for Rs. 10,00,000.

Broach Fine Counts Spg. & Wvg. Co., Ltd., Broach

(Agents: Brijlal Bilasrai & Co., Bombay)

The working of the company for the year ended 31st March 1944 shows a profit of Rs. 13,78,996-14-9 without providing for depreciation.

Against the profits of 1942-43 and 1943-44 there is the liability for income-tax, super-tax and excess profits tax for the two years amounting approximately to Rs. 18,00,000. Further under section 10 of the Finance Act, the compulsory deposit for the two years works out at about Rs. 3,40,000. Taking into account also the fact that depreciation on the fixed assets of the company must also be provided out of the profits of the year, the Directors recommend a dividend of Rs. 10 per share out of the profits of the year 1943-44.

The company's property including building machinery and stock have been insured against fire for Rs. 58,72,500 only. Under the War Risks Insurance Ordinances, the company's buildings machinery and stocks are also insured.

Muir Mills Company, Limited, Cawnpore

(Managing Director: K. J. D. Price)

After providing for a bonus to employees and setting aside Rs. 67,00,000 for estimated taxation, Rs. 16,00,000 to general reserve and Rs. 50,000 to pension and gratuity fund, the result of the working for the year ended 31st December, 1944. is a profit of Rs. 6,64,632-11-5. Adding to this Rs. 4,83,679-1-4, being the balance brought forward from 1943, there is a sum of Rs. 11,48,311-12-9 available which the Directors have allotted as follows:—

Ad-interim dividend of Re. 1-8 per share on the preference shares, and Rs. 5 per share on the ordinary shares to 30th June (both free of income-tax) Rs. 1,95,000; leaving for disposal a sum of Rs. 9,53,311-12-9, which they propose to deal with as follows:—Final dividend of Re. 1-8 per share on the preference shares (free of income-tax) Rs. 45,000; final dividend of Rs. 5 per share on the ordinary shares making 20 per cent. for the year (free of income-tax) Rs. 1,50,000; bonus of Rs. 10 per share on the ordinary shares (free of income-tax) Rs. 3,00,000; bonus to Directors Rs. 10,000 and to carry forward Rs. 4,48,311-12-9.

Madhusudan Mills, Ltd., Bombay

(Agents: Messrs. Amersey Damodar)

The working of the company for the year ended 30th June, 1944, shows that after debiting a sum of Rs. 1,00,000 for depreciation fund there is a profit of Rs. 84,02,030-4-7, which with Rs. 71,22,294-11-0 (subject to taxation) brought forward from the previous year's account makes a total of Rs. 1,55,24,324-15-7. From this is deducted the amount of taxation paid in respect of accounting year ending June 1942 of Rs. 18,62,680-8 and the final dividend at the rate of Rs. 15 per share of Rs. 100 each and Rs. 3 per "B" share of Rs. 20 each, free of income-tax for the year 1943 amounting to Rs. 3,24,000 and an *ad-interim* dividend at Rs. 12-8 per share of Rs. 100 each and Rs. 2-8 per "B" share of Rs. 20 each, free of income-tax to 31st December, 1943 of Rs. 2,70,000 and the provisional excess profit tax paid for the year 1942-43 of Rs. 31,00,000 leaving a balance of Rs. 99,67,644-7-7. Out of this sum the Directors recommend payment of final dividend at the rate of Rs. 12-8 per share of Rs. 100 each and Rs. 2-8 per "B" share of Rs. 20 each, free of income-tax, which will absorb Rs. 2,70,000 and leave a balance of Rs. 96,97,644-7-7 subject to taxation to be carried forward.

Capital expenditure incurred during the period under report amounts to Rs. 27,101-3, being the cost with expenses for purchasing 1,614 sq. yards of land from Sir Ness Wadia, K.B.E.

A property on the north and west sides of the mill, admeasuring about 2578 sq. yds., having three small workmen's chawls, fetching a monthly rent of about Rs. 600 has also been purchased for Rs. 88,000 plus usual costs.

Insurance against war risk, riot, civil commotion and fire risks, loss of profit and standing charges and boiler and steam apparatus explosion risk have been taken for machinery, buildings, stock of cotton, yarn, cloth, waste, etc.

Kohinoor Mills Co., Ltd., Bombay

(Agents : Killick Nixon & Co.)

The working of the company for the year ended 31st December, 1944 shows that the profit for the year after deducting depreciation amounting to Rs. 5,03,365 based on the income-tax statutory allowances is Rs. 1,38,11,410. From this amount the Directors have set aside for special depreciation Rs. 2,50,000; as provision for taxation Rs. 1,05,64,000, and towards the estimated compulsory deposit of Rs. 23,60,564 payable to the Government of India under section 10 of the Finance Act, 1942 by transfer to machinery reserve Rs. 12,50,000. To the amount thus left is added the balance brought forward from last year of Rs. 1,03,873. Finally, the amount paid as *ad-interim* dividend at the rate of Rs. 12 per share free of income-tax of Rs. 5,40,000 is deducted, leaving a balance available for disposal of Rs. 13,11,283. From this sum the Directors recommend the following allocations:—Payment of a final dividend at the rate of Rs. 11 per share free of income-tax Rs. 4,95,000, payment of a bonus at the rate of Rs. 5 per share free of income-tax Rs. 2,25,000, equalization of dividend account Rs. 2,00,000, employees' pension and gratuity account Rs. 2,00,000, leaving to be carried forward to next year's accounts Rs. 1,91,283.

The Directors have, as in the previous year, placed a sum of Rs. 2,50,000 to Special Depreciation.

Out of the amount of Rs. 30,00,000 invested in Defence Loan 1953/55 and standing in the joint names of the company and the Secretary, Finance Department, a sum of Rs. 3,00,000 was released by the Government of India to pay for new machinery which was delivered during the years 1943 and 1944.

Various alterations and additions to the mill buildings including a new creche were carried out during the year at a cost of Rs. 54,085. The Directors have secured at a cost of Rs. 4,14,747 a piece of land measuring 13,817 square yards, between Katrak Road and the western boundary of No. 2 Mill, together with the buildings situated thereon.

Machinery to the value of Rs. 1,70,552 was received and erected during the year. The amount paid to mill employees as dearness allowance during the year was Rs. 33,32,325. In addition an amount of Rs. 7,12,518 has been set aside to be paid as bonus for the year 1944.

The mill property as at 31st December 1944 was insured against loss by fire and all risks arising out of riots and civil commotion for the following amounts:— Buildings Rs. 47,17,100, machinery Rs. 1,22,67,800 and stocks Rs. 1,48,02,200.

The profits and fixed charges have been insured against a stoppage by fire for Rs. 2,32,00,000. Under the Government of India War Risks Insurance Ordinance, the mill stocks were covered for a sum of Rs. 1,46,00,000 and the mill buildings and machinery were covered for a sum of Rs. 1,87,78,000 as at 31st December 1944.

Commercial and Technical Organizations

(*Concluded from page* 424)

In any case it was felt that the policy of the Agricultural Department to encourage the growth of M4 to the exclusion of every other variety throughout Sind might prove dangerous.

Woollen Piecegoods: Margins allowed for Importers.—Price Control Notification No. 1/2(29)/44-CG(CS) fixed the margins for wholesalers and retailers only and the importer was treated as a wholesaler or a retailer according to how he sold the goods. Therefore, if the importer's buyer was a wholesaler he would have to share with the latter the difference between the landed cost and the wholesale ceiling price or the wholesaler's margin of 10 per cent. as per note 1 of the notification. Thus the importer would in most cases have to be satisfied with a margin of about 5 per cent. which was insufficient under existing conditions for the following reasons:—This business mostly had to be done on description, as samples were not always available; deliveries/shipments were very uncertain and goods might arrive out of season and might have to be stored; storage involved additional risks (damage by insects) as the goods were no longer packed in tin-lined cases. This risk was enhanced by the delays caused in complying with lengthy control formalities; greatly reduced turnover as compared with normal times and greatly increased overhead expenses.

There was justification in asking that in this respect both cotton goods and woollen goods should be treated in the same manner, because conditions before the war were also alike.

NEWS OF THE MONTH

Indian

The Punjab Institute of Textile Technology.—The name of the Government Central Weaving Institute at Amritsar has recently been changed to the Punjab Institute of Textile Technology. The present Principal is Mr. N. Banerji.

Bombay Working Class Cost of Living Index.—In January the working class cost of living index number for Bombay with the average prices for the year ended June 1934 equal to 100, was 229. This was seven points lower than in the preceding month. The index number for food articles declined by 13 points to 254.

Morarjee Goculdas Mills Declare Interim Dividend.—At a meeting of the Board of Directors of the Morarjee Goculdas Spinning and Weaving Co., Ltd., Bombay, held on 13th February, 1945, it was resolved to pay an *ad interim* dividend at Rs. 12 per share for six months ended 31st December 1944 and it will be paid on and from 2nd April 1945.

Madras Labour Dispute Referred for Adjudication.—The Madras Government have directed that the trade dispute between the management of the Buckingham and Carnatic Co., Madras, and their workers be referred to Rao Bahadur M. Venkataramayya, retired District Judge, for adjudication. Mr. M. Venkataramayya will make a preliminary inquiry into the nature of the dispute and make a report to the Government as to the matters on which he considers adjudication advisable.

Radio Owners and Repairs.—The Joint Honorary Secretary, All India Radio Merchants' Association, Bombay, writes that in accordance with the latest Government Order (Posts and Telegraphs), it is obligatory on the part of every radio owner taking his radio for repairs to a radio dealer to show his wireless licence to the dealer, as the dealer is required to maintain a register showing licence number and date of expiry for the inspection of the Posts and Telegraphs Department. The dealer is not permitted to return the radio to the owner unless the above information is furnished. The public is generally not quite aware of this new Order and it is hoped that this will enlighten the radio owners about the position.

Textile Calendar

MARCH

1st, Thursday :
Second All-India Textile Conference, Bombay.

3rd, Saturday :
Federation of Indian Chambers of Commerce and Industry, Annual General Meeting, New Delhi.

16th, Friday :
Bombay Presidency Trades' Association, Ltd., Annual General Meeting, Bombay.

29th, Thursday :
The Textile Stores and Machinery Merchants' Association, Bombay Presidency, Annual General Meeting, Bombay.

APRIL

10th, Tuesday :
Textile Control Board Meets in Bombay.

11th, Wednesday :
The Millowners' Association, Bombay, Annual General Meeting.

12th and 13th, Thursday and Friday :
Federation of Piecegoods and Yarn Merchants' Associations of India, Bombay, First Annual General Meeting.

Board of Studies in Textile Technology, University of Travancore.—The following is the list of members of the Board of Studies in Textile Technology, Trivandrum, which has been reconstituted for a period of three years from 4th February 1945:—

Mr. M. P. G. Nair, T.T.W.Fm (Saxony). Spin. Tech. (Bohemia), Principal, Institute of Textile Technology, Trivandrum (*Chairman*); Dr. D. L. Deshpande, B.Sc. (Hons.), M.Sc.Eng. (Manc.), Ph.D., A.M.C.T., A.M.I.Mech.E., M.I.E., Principal, College of Engineering and Dean of the Faculty of Technology, University of Travancore; Captain K. Kylas, Professor, Institute of Textile Technology, Trivandrum; Messrs. B. K. Murthy, B.E.Mech. M.Sc.Tech. (Manc.), A.M.C.T., Director of Textiles, Mysore; V. G. Nair, B.A., M.Sc.

Tech., A.M.C.T., F.C.S., Technical Chemist, Parapanagadi; T. Logie, of A & F. Harvey Mills Ltd., Ambasamudram; and Dowlet Ram Tawker, Manager, A. D. Cotton Mills Ltd., Quilon; Dr. A. N. Potti, M.A., Ph.D., Professor, University College, Trivandrum, and Mr. A. G. Pandit, Manager, the Travancore Rubber Works, Trivandrum.

New Strain of Cotton Evolved at Surat.—The Annual Report of the Department of Agriculture, Bombay, for 1942-43, says that botancial research work, designed to increase the outturn and quality of the crops, was carried on at a number of Government farms and research stations throughout the districts. Considerable success was achieved in the evolution of improved varieties of cotton, wheat, etc. An improved strain of cotton evolved at Surat Government Farm may shortly replace 1027 ALF as the standard improved cotton for the Surat tract. The " Vijay " strain of cotton evolved in Gujarat has been fully tested and an organized seed multiplication and distribution scheme is being subsidized by the Indian Central Cotton Committee, and promising strains have been obtained at other centres.

Ahmedabad Textile Dispute Not Settled.—The Ahmedabad Millowners' Association and the Labour Association have disagreed on the question of grant of bonus to mill workers in Ahmedabad. An announcement to this effect was made when the Chief Conciliator met representatives of the two bodies on 24th February 1945.

A Press message says: Mr. Gulzarilal Nanda, Labour Secretary, stated in an interview: " As no agreement has been reached we are going to ask the millowners to put the bonus issue before arbitration once again. As there is a cloth famine in Bengal and other parts of the country, we do not want to increase the hardship of the people by any of our actions. Our effort is to leave no stone unturned to secure arbitration and we are going to take immediate steps to secure it."

Imports of Cotton Ropes, Tapes and Bandings.—In reply to a communication addressed to Government on the above subject, the Indian Merchants' Chamber, Bombay, have been informed that the import of these materials was necessary and that the import quota of these materials, which formerly stood at 5,500 cwts., had been reduced to 3,000 cwts. The Chamber in a further communication dated 19th January reiterated their contention that the import of these articles was not necessary as, in their opinion, the indigenous production was sufficient to meet the requirements of the textile industry. Government in their letter dated 25th January remarked that after careful inquiries from the mill industry they found that Indian-made ropes, etc., were not suitable for certain purposes and, therefore, the authorities were not prepared to reduce the import quota below 3,000 cwts., as suggested.

Unsatisfactory Marking and Packing of Goods Exported from India to East Africa.—It has been reported to the Indian Government Trade Commissioner, Mombasa, by the Port Authorities in East Africa that they are experiencing considerable difficulty and inconvenience in dealing with claims in respect of baled cargo from Indian ports, especially Bombay. One of the contributory causes seems to be the use of second-hand coverings on bales showing numerous and varying marks resulting in confusion in tallies and deliveries. It is, therefore, suggested that bales and packages should have new coverings bearing clear and distinctive marks. It is needless to emphasize that the practices complained of, if continued, are likely to have serious consequences for India's export trade with East Africa, and exporters to that country are strongly advised in their own interests to take all possible steps to remedy these defects without delay.

. Dr. Nazir Ahmad at New Orleans : Indian Cotton Prospects.—Dr. Nazir Ahmad, Indian cotton technologist, while at New Orleans, U.S.A., predicted greater cotton production in India by increased use of fertilizers and by modern methods of farming. He said that India would buy large quantities of fertilizers from America.

Interviewed during a tour of the Agricultural Department's cottton research laboratories there, Dr. Ahmad expressed the belief that " Indian cotton will compete far less with the American crop because the proposed 15-year Indian reconstruction programme calls for greater home consumption of Indian products. This 15-year programme, estimated to cost 3,000,000,000 dollars, promises to be a boon to American commerce, industry and agriculture."

Dr. Ahmad said that improvement of the lot of the Indian farmer—one of the objectives of the programme—would eliminate a contributing factor in cheap competition in the world cotton markets.

Fined for Profiteering in Cloth.—The manager of the Piecegoods Department and the salesman of Messrs. Ralli Brothers Ltd., Bombay, who were charged under the Hoarding and Profiteering Prevention Ordinance for selling 1,780½ yards of cloth at Rs. 2-15 per yard, when the landed cost of the same per yard was only As. 14, were recently sentenced by Mr. V. K. Muranjan at the Mazagon Police Court and fined Rs. 1,000, Rs. 200, and Rs. 100 respectively. In default of fine, the first two accused were sentenced to two weeks' simple imprisonment.

In passing sentence, the Magistrate thought that a fine would meet the ends of justice as the case was not one of deliberate contravention of the law. The sale, the Magistrate thought, was done on the *bona fide* belief that the provision of the Cotton Cloth and Yarn Control Order applied to cotton textiles, while the Hoarding and Profiteering Prevention Ordinance did not apply. The Press notes and notifications regarding this, the Magistrate thought, would lead any layman to the same belief. Thus, even though motives of greed and anti-social conduct could not be suggested against the accused, the Magistrate held that in assessing the fine the unauthorized profit made by the Company should be considered.

Technical Training Abroad : India Government's Scheme.—The Central Government, New Delhi, have requested Provincial Governments, chambers of commerce and employers' organizations in India to expedite their recommendations regarding candidates who are to be sent to the U. K. and the U.S.A. for higher technical training. It is pointed out that the Government of India have decided to send the first batch to the U.K. so as to reach there not later than June 1945.

Candidates required for training abroad, under this scheme, will be persons possessing a university degree in science or engineering or equivalent diploma and at least three years' industrial experience in India. The duration of training will be about a year, but in special cases it may be extended up to two years. The trainees will be required to take refresher courses in theory, but industrial experience in factories and workshops abroad, of the kind on which they will be employed in India, will constitute the most important part of the training.

Among the trades for which the Government of India contemplate providing training facilities are: mechanical engineering, electrical engineering, radio engineering, aeronautical engineering, shipbuilding, marine engineering, civil engineering, structural engineering, metallurgy, generation of electricity, locomotive construction, chemical engineering, fertilizers, plastics, glass and steel manufacture.

Institute of Textile Technology, Travancore : Annual Day Celebrations.—The Annual Day of the Institute of Textile Technology of the Travancore University was conducted on the 23rd February 1945 under the presidentship of Rao Sahib L. Venkitakrishna Iyer, B.A., B.E., I.S.E., the Chief Engineer of the Travancore State.

The final meet of the sports were held in the morning and the public meeting was conducted at 6 p.m. after the social at 5 o'clock.

The Principal of the Institute, Mr. M. P. G. Nair, T.T.W.Fm. (Saxony), Spin. Tech. (Bohemia), welcomed the gathering and in his annual report mentioned the difficulties he has had to encounter in the procurement of machinery and other appliances due to the present war conditions. He paid a tribute to the members of the staff who were actually devoting their leisure and useful hours in the pursuit of industrial research. In this connection, he mentioned the worthy contributions of Captain K. Kylas and Mr. T. V. Punnoose as well as the problems taken up by Messrs. G. S. Ramakrishnan, H. N. Sarma and K. M. Mathew. The main principle in the research scheme is mostly the application of science in the cause of industry. In the matter of sports and games and in the matter of examination results, the progress of the Institute was very encouraging, observed the Principal.

There was a fancy dress competition as well as music and dance which was highly appreciated.

Technological Institute : Central Government's Proposal.—In order to ensure an adequate supply of technical personnel to meet the demands of the administrative services and industrial development in the country in the post-war period, the Government of India, says a Press note, have appointed a committee, with Mr. N. R. Sarker as its Chairman, to consider the establishment of a high-grade technological institute in India, possibly on the lines of the Massachusetts Institute of Technology, to provide advanced instruction and training in technology.

The committee will consider and make recommendations to the Government of India regarding the scope and size of the proposed institute, the site of the institute, its control and management, recruitment and conditions of service of its teachers, the cost involved and other relevant questions relating to the establishment of such an institute and its future development.

The following have been invited to serve on the committee:—Mr. N. R. Sarker (*Chairman*), Mr. A. D. Shroff, Mr. W. W. Wood, Sir J. C. Ghosh, Dr. Nazir Ahmad, Mr. C. E. Preston, Mr. W. W. Ladden, Mr. M. D. Parekh, Sir S. S. Bhatnagar, Mr. J. K. Srivastava, Mr. G. I. Mehta, Sir Sobha Singh, Major-General D. R. Duguid, Brigadier R. D. T. Woolfe, Mr. W. G. W. Reid, Sir Frederick Tymms, Mr. P. J. Edmonds, Mr. H. V. R. Iengar, Dr. A. H. Pandya, Mr. S. Lall, Mr. Dharma Vira and Mr. John Sargent (members).

Training Indian Labour Officers in Britain : Government Scheme.—Arrangements are being made to send the first batch of trainees, under the scheme for training labour officers in the United Kingdom. It is proposed to send three batches, each consisting of 20 officers of the Central and Provincial Governments.

This training scheme will provide the personnel necessary for labour administration in the post-war period. Owing to the importance of war production and the necessity for rapid industrial expansion labour problems have come into greater prominence in India during the present war, and further important developments are inevitable in the post-war period.

Labour policy in India is moulded on the experience and practice of other more highly industrialized countries, and it is necessary to have a trained and experienced staff for labour administration. Officers of the Labour Departments of the Central and Provincial Governments, who will be sent for training under this scheme, will return with knowledge of certain aspects of labour administration which are of immediate importance, for example, industrial relations including the settlement of labour disputes, factory inspection and labour welfare, wage regulation and inspection, employment exchanges, demobilization and resettlement, welfare and dock labour and port registration schemes.

The course in the United Kingdom, theoretical as well as practical, will take six months and, in special cases, may be extended to eight months. The training will be divided into two parts: training at the headquarters of the Ministry of Labour and National Service, and training in the regions. At the headquarters, the training will be theoretical and elementary dealing mainly with the underlying principles of policy and procedure and with the organization and functions of the Ministry of Labour and National Service. Training in the regions will be more detailed and practical.

In view of the contemplated expansion of the machinery of employment exchanges, a large number of officers will be specially trained in this subject.

Foreign

Large-scale Cotton Textile Enterprise in South Africa.—During the past three years, plans have been prepared by consultants of industrial development, including an English expert, for the establishment on an economic basis of a large cotton textile enterprise in South Africa. The enterprise envisages the establishment of a plant of some 60,000 spinning spindles and 2,000 looms to produce between 50 and 60 million yards of cloth yearly and will provide direct employment for about 3,500 employees.

E. African and Sudan Cottons.—The negotiations between the Government of India and the East African and Sudan Governments announced in the Government of India Press *communique* dated 23rd October 1944, have now been finally concluded, says a Press *communique*.

The 1944-45 crops of East African and Sudan cottons suitable for consumption in India will be sold to India at Rs. 850 per candy Bombay dock delivery new mill terms for East African B P 52 and at corresponding prices for other varieties.

Textile Production in Central Siberia.—The first cotton textile mill ever seen east of the Urals was erected about 10 years ago in Barnaul, in Central Siberia. Raw cotton was readily available and the plant progressed rapidly. Recent reports indicate that from June 1941, until August of this year, more than 100,000,000 metres of cloth were woven in that plant. A second weaving factory has now been placed in operation.

Flax cultivation was introduced into that area somewhat later, and the flax is being converted into linen in a new weaving plant in Barnaul.

Cotton Firms Should Turn to Rayon : Sir Raymond Streat's Advice.—Sir Raymond Streat, Chairman of the British Cotton Board, put forward a strong plea for cotton firms turning to rayon in his Liverpool speech on 26th February. He said that a big and rapid expansion in rayons can only come that way, and added that the competitive cotton position after the war for a year or two, when world-wide shortages have to be made good, will not appreciably be affected by these other developments. But, on a longer view, substantial changes may emerge. Improved varieties of cotton would have to be grown.

Priority to Home Orders: British Machinery Makers' Assurance.—The *Cotton Board Trade Letter* states that in discussions with the Chairman of the Cotton Board, machinery makers expressed willingness to give reasonable general priority to home orders and the reconditioning of existing machinery and gave assurances about their price policy. Makers of spinning and weaving machinery did not seek protection against imports of foreign machinery, but makers of winding machinery took the view that they should receive the same degree of protection against foreign competition as they received in 1939.

Textile Machinery Imports into India.—We are indebted to the *Trade and Engineering* Section of *The Times* for a summary and aggregate of the imports of textile machinery into India for the five years ended March, 1938, says the *Textile Recorder*. From this it would appear that aggregated imports were valued at Rs. 165,000,000, and that of this the U.K. was responsible for no less than Rs. 135,000,000. With the exception of certain requirements for the leather industry, the U.K. always took the lead, and this was particularly marked in cotton spinning machinery, in which category only one-seventh came from any other source.

Tariff Control to Help British Exports.—The abandonment or a drastic reduction of the most-favoured-nation clause in international trade was urged on 19th February by the Secretary of State for India, Mr. Amery. " We must give effective priority to purchases from the sterling area as well as to our exports to that area," Mr. Amery said, adding that after the war Britain would no longer be able to live on " theories and assumptions which may have held good in the economic world of the nineteenth century. "

Mr. Amery urged control by tariff, adding: " It will be one of Government's first duties to conclude trade treaties to help our exporters. "

Rumours about Platt Bros. Leaving Oldham Denied.—Rumours about the world-famous textile machinists' firm of Platt Bros. leaving Oldham caused some disquiet in that town. Sites at Squires Gate, Blackpool, and other places had been mentioned, and in order to ascertain the true position a deputation from the Oldham Town Council recently waited on Sir Walter Preston, Chairman of the company, when they were reassured that no transfer of these vast works, which have made Oldham's name known throughout the world, is contemplated.

It is known that the firm have a vast export and home programme to fulfil as soon as conditions allow, and it may be necessary to set up a kind of shadow factory to cope with the business.

Improved Strain of Peruvian Tanguis Cotton.—A big improvement in the strain of Peruvian Tanguis cotton is reported by the *South American Journal*. After much research by the Institute of Cotton Genetics in Peru, a new seed is being distributed to cotton estates, for which six important claims are made. These are: That it increases the staple of the cotton from $1\frac{3}{16}$in. to $1\frac{3}{8}$in.: that it increases the ginning yield by 37 to 40 per cent.: that it increases the size of the boll, thereby facilitating picking: that it eliminates all colour types: that it preserves the essential texture of Tanguis, maintaining the degree of coarseness which is preferred for certain types of hosiery and underwear, especially in mixtures with wool: and that it increases the yield per acre.

Jute Production in Brazil.—The official publication, *Agriculture in the Americas*, says that Brazil which used to import most of its jute from India lately has been so successful in cultivating fibre at home that "substantial amounts are being produced and increasing quantities of jute products are being exported to the United States."

Whereas in India jute is so cheaply produced that the medium grade sells in New York wholesale market at 4 to 4½ cents per pound, the publication said, it costs 3 to 4 cents to produce jute in Brazil and the "consumer must pay considerably more than this" because of the expense of transportation. Transportation to mills often costs as much as it does to produce jute in Brazil.

"Increased production of jute is one of the most interesting developments that have taken place in Brazil in recent years. Originally Brazil imported most of its jute from India but importation of fibre has been curtailed owing to the war."

Brazil's jute, like that of India, is of the roundpod variety. Two crops may be produced annually, the first harvest being between March and June and the second between October and November. The publication said, Government loans are available to independent growers.

International Cotton Committee Meeting: India's Representatives.—The United States State Department has announced that the International Cotton Advisory Committee established in September 1939 to study and report on problems in the world's cotton industry will open its 4th meeting in Washington in the first week of April. In addition to the United States the countries which are members of this Committee and which are expected to send delegates are Brazil, Egypt, India, Peru, Mexico, Turkey, Anglo-Egyptian Sudan, the Union of Soviet Socialist Republics and British and French cotton exporting colonies. The primary objectives of the discussions will be a survey of various aspects of the world cotton situation, especially problems affecting international trade in that commodity and the formulation of recommendations for subsequent consideration by individual countries for the solution of such problems. The Director of the Office of Foreign Agricultural Relations, U. S. Department of Agriculture, Mr. Leslie Wheeler, is Chairman of the Committee and will preside at the opening session.

In this meeting the Government of India would be represented by the Trade Commissioner in New York and by the Controller of Raw Materials and Stores in the Textile Commissioner's Office.

Fifty Years Ago

(From the *Indian Textile Journal*, March 1895)

Textile Club for Bombay

"In Bombay a textile club is being formed and already over 50 members have been enrolled. A committee has been appointed to select suitable premises and one of several available bungalows in the neighbourhood of Parel or Chinchpoogly will probably be selected. . . . It is proposed to enter into negotiations for affiliation with clubs similarly constituted in England, so that members of clubs in either country shall, on payment of the monthly subscription, be entitled to all the privileges of the affiliated club without going through the usual formalities. . . .

"Inaugurated with so much enterprise and enthusiasm by all sections of the European mill community, these textile clubs possess all the elements of a long and harmonious career."

The Indian Textile Journal

INCORPORATING:- INDIAN IMPORT & EXPORT TRADES JOURNAL — INDIAN INDUSTRIES & POWER

Founded by SORABJI M. RUTNAGUR

55 th Year

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EDITORIAL

India and U.N.R.R.A.

THE Government of India have appointed Mr. Kasturbhai Lalbhai as India's representative on the Textile Committee of the Combined Production and Resources Board of the United Nations Relief and Rehabilitation Administration; the United Kingdom and the United States of America are the other countries participating in its deliberations. India was hitherto represented by Whitehall, although it occupies the second place among cotton textile manufacturing and exporting countries. It is something, therefore, that Government should have since seen the desirability of separate representation for it.

The aim of the Textile Committee is to make comprehensive surveys of war-time and post-war textile requirements of the world in relation to the productive capacity of the different manufacturing countries. The findings of the Committee are to be periodically submitted to the Board with its recommendations as to what part each country should be asked to play towards meeting the general requirements. In the first half of 1944, the United Kingdom, the United States of America and India allocated about 10.7 per cent. of their aggregate production for export purposes; it worked out at 490 million yards or 9 per cent. of production for the United States, 250 million yards or 25 per cent. of production for the United Kingdom, and 280 million yards or 9 per cent. of production for India. It is believed that according to present allocations all Indian and British supplies have been allocated to the eastern hemisphere.

Cotton goods are a vital military necessity to satisfy the minimum civilian needs of Australia, Latin America, Africa and the Middle East countries, which are serving as bases for military operations or supplying men, munitions, or essential raw materials for the conduct of the war. But it has been authoritatively estimated that nearly 50 per cent. of the world's productive capacity will have been damaged before the war is over and England, America and India may have to pool their resources and formulate plans for some kind of international rationing or zoning of export markets. No doubt countries in Europe like France and Belgium have been liberated, but it is feared that it will take a long time for them to be in a position to supplement Allied production for war purposes; until then they may continue to require supplies from England. On the other hand, as China and other Far Eastern countries are being cleared of the enemy, there will arise an enormous demand for cotton textiles to be met by the Allies, particularly because of the possibility that Japanese textile plant may emerge from the war in a condition that may not permit it to engage in export trade on the same level as it reached seven or eight years ago.

So far as India's cotton textile exports are concerned, Mr. Kasturbhai Lalbhai declared the other day that it would be wise for India to "select such *natural* markets as could be advantageously served and maintained for a long time to come, instead of clinging to unnatural markets which had been thrust on the country owing to the exigencies of war." India's "natural" markets are represented by countries bordering on the Indian Ocean and include Ceylon, Burma, Malaya, Australia, the East African littorals and the Middle East group, which last consists of Egypt, Turkey, Iraq, Iran, Saudi Arabia, Palestine, Syria and Lebanon. It is worthy of note that in several of these countries the urge for self-sufficiency has been gradually developing and considerable progress has already been made in the growing of cotton and/or the establishment of the cotton textile manufacturing industry, as, for example, in Egypt, East Africa, Ceylon and Australia. The countries of the Middle East, on the other hand, are predominantly agricultural and their raw material exporting economy is complementary to the economy of the highly industrialized countries of Western Europe and their foreign trade is, therefore, canalized in that direction.

About Dhotis and Saris

As in the matter of foodstuffs, so also in the matter of clothing, rationing of a kind has at last had to be resorted to. The province whose administration of textile control was attended with the greatest degree of success has, naturally, set the pace, and since 21st March 1945 *dhotis* and *saris* are being rationed in Bombay City and suburbs.

Under the Bombay scheme, a person has a reasonable chance of obtaining a pair of *dhotis* and a pair of *saris* every six months from any one of the approved cloth shops. We say "reasonable chance" advisedly, because the scheme does not guarantee supply but only aims at "controlled distribution of available supplies"; guaranteed supply should be possible with the introduction of full rationing in the immediate future. The six-month period may be reduced to four if the supply situation warrants it, and the scheme, we are informed, may soon be extended to cover mulls and voiles; but it does not apply to handloom *saris* and *dhotis* which will be available as hitherto at controlled rates. It was reported that statistics of persons habitually using *dhotis* and *saris* were being collected by the Provincial Textile Controller's Office and the Provincial Controller himself has, in the meanwhile, issued an appeal that people who are not habitual users of *dhotis* and *saris* should abstain from using their ration cards for the purpose.

While the Bombay experiment is being watched with interest, it is useful to bear in mind that the adoption of country-wide rationing of cloth depends for its success on a thorough reduction in the number of varieties at present being produced. It is clear that they should be brought under manageable proportions. And, similarly, if controlled distribution is to be attended with hundred per cent. success, the problem of all-India supervision needs to be squarely faced. The point was raised in the latest session of the Central Assembly by several speakers. The representative of the Millowners' Association, Bombay, emphasized that, constitutional difficulties notwithstanding, the Textile Commissioner should be armed with adequate power to supervise the enforcement of control measures with uniform efficiency throughout the country. We wonder why no official assurance has been forthcoming on this point.

"Relief" Supplies from Lancashire ?

INDIAN cotton mill production has now risen to 4,800 million yards and handloom production amounts to 1,500 million yards. Out of this, however, exports account for 600 million yards and Defence requirements for 850 million yards, leaving only about 4,800 million yards for internal civilian consumption. To increase production further is not impossible, but that means increased coal supply, increased supplies of textile accessories and stores, multiple shift working and the recruitment of additional labour, standardization or rationalization of production, and, finally, tax reliefs for machinery replacements and renewals. If these factors were tackled successfully, it is believed, by trade union leaders among others, that Indian mill production could be stepped up very considerably. But the Hydari Mission, which recently returned from England, has found another, and less generally acceptable, solution to this problem of shortage. By the arrangement which it has negotiated with His Majesty's Government, the Indian cotton textile supply situation is to be eased to the extent of 600 million yards in 1946. This saving is to be made good by reducing exports and Defence requirements by 200 million yards each and increasing production by 200 million yards with the aid of mill stores and accessories which His Majesty's Government have arranged to supply India with. The deficiency in the Defence requirements is to be made good by the United Kingdom, which may mean exports to India of 200 million yards or more. Why, it is asked, should not Indian productive capacity be left free to cope with the whole internal civilian and Defence demands, and to cater to such of the export markets as India chooses in the light of its own requirements ?

The Adarkar Plan of Health Insurance

The Problem of Its Statistical Basis

By A. N. AGARWALA, M.A., *University of Allahabad*

(*Specially Contributed*)

PROFESSOR B. P. Adarkar's Scheme of Health Insurance for Industrial Workers of India has been criticized in certain quarters on the ground that it is not based on an adequate volume of reliable and representative statistics regarding sickness; and consequently the contribution-benefit structure erected in it is suspect if not actually unsound. Now, it is quite true that in this land of permanent statistical famine, morbidity statistics are conspicuous by their absence. Prof. Adarkar is to be regarded as a pioneer in collecting such morbidity statistics as are in existence in this country, which have been published by him in the shape of some very useful appendices to his valuable report. But a glance at these statistics would show that they are unfit for affording a basis on which a sickness insurance scheme could be built up with certainty and confidence. They exhibit great variations which are almost shocking. We give below a list of selected statistics collected by Prof. Adarkar, which are very revealing:—

INCIDENCE OF SICKNESS IN

Textile industry		Engineering industry		Minerals and metals	
Lyallpur Cotton	1.68	Addison	0.69	Tata Iron, Sigua	3.56
Lakhmiratan	2.04	Tata Hydral	1.22	Tata Iron, Malkra	5.36
Delhi Cloth	4.93	East India	2.70	Indian Copper, Moubhander	6.69
Buckingham	5.84	Math. Instr.	4.18	Tinplate Co.	9.29
Cambodia	7.15	Rifle Factory:—		Assam Oil	10.9
Rajalakshmi	9.28	Ishapur	7.30	Indian Copper, Mosabomi	10.94
Motilal Agarwal	11.41	Jubbulpure	10.43		
Pandyan	12.1				
Madura	13.1				
Tuticorin	14.0				
Ambasamudram	14.6				

The range of variation in the case of all the industries to which the scheme is to be applied in the first instance is so great as to make one pass a *prima facie* judgment against their use as a basis of a health insurance scheme. They suffer from several technical defects. The aggregate volume of statistics that are available in the country and have been collected by Prof. Adarkar is extremely inadequate, and, in spite of the great thoroughness and carefulness with which he has accomplished this difficult task, it would be unpardonable to raise the superstructure of a health insurance scheme entirely and exclusively on them. The universe is too narrow to allow the law of averages to work itself out. Besides this, these statistics have a certain degree of non-comparability. They relate to the sickness schemes which some companies have in force, but they use the term "sickness" in varying senses, and the terms and conditions under which sickness benefits are granted are also not identical. The Vaidyanathan Actuarial Committee observed that " the chief drawback of the statistics is that the companies had not been keeping their books in such a way as to enable rates of sickness to be calculated on a uniform definition of the term ' sickness.' Some have, therefore, returned all periods of sickness, whether or not sick benefits were paid, while others have returned only periods of sickness for which benefits were paid." Besides this, there is the vital problem of the representative character of these statistics, which is highly doubtful. The undertakings furnishing these figures do not have the representative character bestowed upon them by random sampling or even deliberately, and consequently they cannot be fully relied upon without the fear of indulging in a fallacy of false generalisation. Finally, these statistics are generally vitiated by deliberate errors committed on the side of moderation. It is common knowledge and a frequent allegation of labour leaders that factory doctors are not fair in certifying the existence of sickness and the number of sick persons declared sick has to closely conform to the number of persons which the factory can or would like to spare at any particular time. Indeed, in many cases the workers who have been refused sickness leave and benefits on the certification of fitness for work by the factory doctor were later found to meet their death just outside the factory gates! The wide divergences in the incidence of sickness from mill to mill is in itself a sufficient indication of an element of deliberate control of sickness incidence.

Sickness benefits are granted in some of the Government undertakings as well and it would have been worth while scanning these statistics, for there is a likelihood of their being free from the element of deliberate error of the type pointed out above. They do not appear to have been made available to Prof. Adarkar and one rather misses their presence. However, even they could not have given any definitely correct idea regarding sickness rate because Government undertakings take only selected workers who are medically and physically fit and otherwise alert and healthy. These better-class workers cannot represent the morbidity rate of an average type.

Prof. Adarkar is as alive to these defects in the statistics as any expert can be, and that is the reason why he has not based his scheme on their foundation but has collected and presented them, for what they are worth, if for nothing else than for showing that it would be erroneous to build up a scheme on them. Consequently, those who criticize his plan on the ground that it is based on defective statistics fail to appreciate the role of the published morbidity statistics in the actual construction of his plan. Prof. Adarkar would be second to none in condemning these statistics and he would readily agree that the available morbidity statistics are not only not of a nature which can serve as a basis for the framing of a scheme but are definitely misleading. Their wide variations render them entirely unusable in any scientific treatment. The fact, therefore, is not this, that they have been still used for deciding the rate of contributions by Prof. Adarkar; but this, that they have been discarded by him as being unreliable and worthless. That, indeed, in a sense is the strong point of the scheme.

But if this scheme is not based on the available Indian morbidity statistics, what are the statistics that form its basis? Is it not an axiom that a sickness insurance scheme must be rooted in actual morbidity statistics in order to be reliable and accurate? These are the logical questions which arise at this stage. Now, it is well known that the quotation of the price of insurance cover in advance on the strength of anticipated cost is the central feature of modern insurance as distinguished from life insurance assessments of olden times. The forecast of cost is indispensable in all types of insurance but in the domain of social insurance in general it has to be done with extraordinary care and caution for the reasons that, (i) whereas in life and property insurances the premium rates charged by competing and old-established concerns are a reliable guide, no such guidance is available in the matter of social insurance in the countries which seek to establish this system of coverage for the first time, and (ii) whereas in life and property insurances premium rates can be changed with respect to fresh subjects from time to time as found necessary, in social insurance the insured group is generally not of such a mental level as to acclimatize itself to changes swiftly and smoothly. On the contrary, such changes may disturb and upset many of them for a considerably long time. It is, therefore, clear that the importance of the statistical basis of a health insurance scheme can by no chance be exaggerated.

Foreign Morbidity Statistics Used?

If that is so and if Prof. Adarkar does not use the available Indian statistics relating to morbidity, does he use foreign statistics for this purpose? No, he does not do that either. In fact, he avoids them as much as the statistics he has himself assiduously and carefully collected, for a variety of reasons which we can ourselves think out. Firstly, while in life insurance international statistics can be easily used with necessary loading in sub-tropical countries like ours, it is difficult to place such complete reliance on foreign statistics in the matter of health insurance, for morbidity statistics are dependent on a number of complex factors which are not identical everywhere. Secondly, the term " sickness " is not used in the same sense everywhere and terms and conditions of benefits are also different. This further impairs the value of foreign morbidity statistics. Then, again, foreign statistics are available in age-groups and might not be altogether useful to a system which cuts out all age categorisations. Even if weighting is resorted to, the average may not still be utilizable because there is no guarantee that age-grouping in India will be identical in its spread as in foreign countries. As a matter of fact, the idea that foreign statistics can be used as a basis for the purpose under discussion requires early revision. The International Labour Office a few years ago observed: " In no branch of labour statistics are differences in the scope and nature of statistics so evident as in that of industrial accidents and in no branch are international statistical comparisons more difficult." The 11th International Congress of Actuaries which met in Paris in July 1937 also came to the same conclusion. What is true of industrial accident statistics is very much likely to be true of industrial morbidity statistics as well, and too much reliance cannot be placed on them for evolving a basis of sickness insurance scheme for this country.

The only usefulness of international morbidity statistics is that they exhibit, in their movements and variations, certain broad and general tendencies which are of great value. For instance, they definitely establish, as has been repeatedly pointed out by Mr. J. H. Thomas, the former Superintendent of Insurance in this country, Prof. Adarkar and the Vaidyanathan Actuarial Committee, that morbidity rate tends to shoot up immediately after the introduction of a health insurance scheme, which may be ascribed to the abnormal malingering tendency in the earlier stages of the scheme, mistakes likely to be committed by the Fund's officials, lack of full control and supervision and the like. They further show that no scheme can permanently commit itself to the statistics on which it is originally based, for the introduction of an actual scheme brings into existence a set of factors for the first time and the behaviour of statistics in this set-up can by no effort be divined before its actual operation.

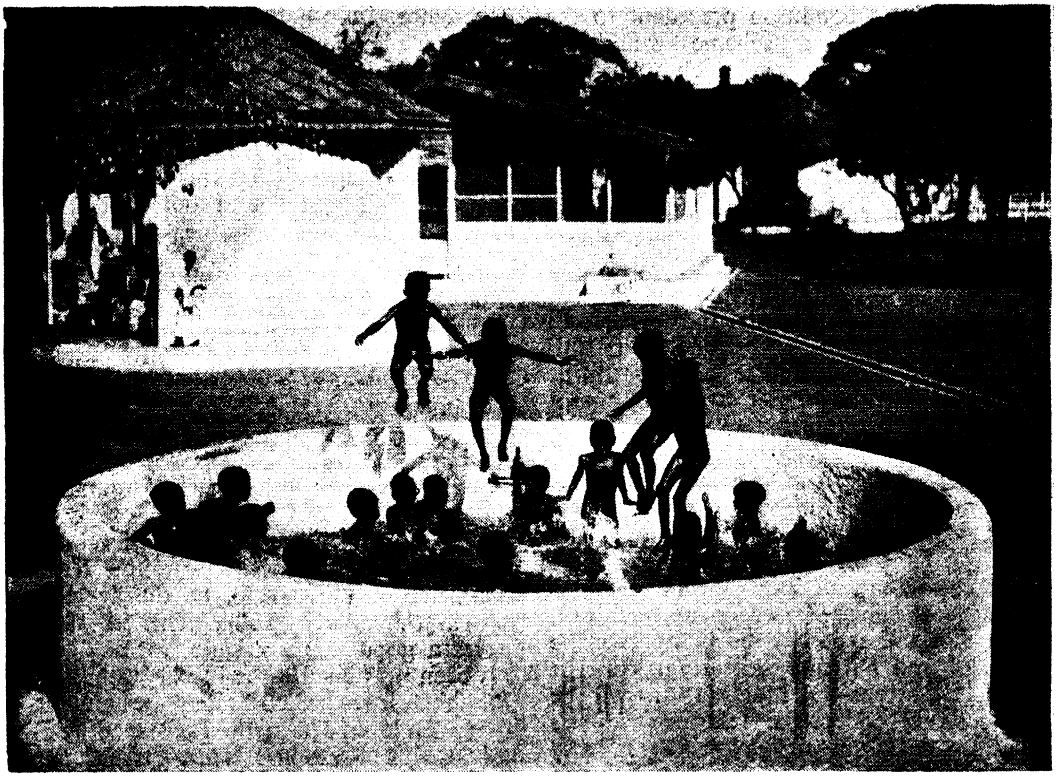
Prof. Adarkar, however, says that " Morbidity data collected in other countries have some value as a guide, especially as indicating the lower limits for Indian experience, which must be admittedly higher than the experience of Western countries " (page 21). Now, it is only to be expected that the Indian experience would be higher than the experience in Western countries: but we are not certain that it can be satisfactorily established, on statistical or some other definite grounds, that the Western experience will indicate the lowest level which the Indian experience would touch. Nor does Prof. Adarkar explain how that indication can be traced. In any case, what we want to ascertain is the average rate of morbidity that may be experienced in this country, and not the lowest rate. As a matter of fact, an idea as to the highest rate would be much more useful than an idea regarding the lowest point: and this is what foreign statistics cannot perhaps furnish. We are, therefore, not certain what actual purpose the foreign morbidity statistics have served in the framing of this report. Perhaps none, except giving a very rough idea of the expected morbidity and showing the behaviour of statistics immediately after the introduction of the scheme and later. They are not capable of being more useful than that; and we are glad that Prof. Adarkar himself lets them go at that and the Actuarial Committee does not even touch them.

The unfortunate position to-day is that we have neither reliable morbidity statistics nor a sickness insurance scheme. We cannot satisfactorily frame a scheme without statistics of this type. But we cannot collect these statistics without the framework of an actual scheme ! As the author of this report correctly observes: " Sickness statistics are, mathematically speaking, a ' function ' of the definition of sickness and the rules and regulations regarding benefits under a scheme. In these circumstances, to insist on correct morbidity statistics as a condition precedent to the introduction of a scheme would be illogical." It is thus very much a hen-and-egg puzzle. It is a vicious circle and had to be broken at one point or the other.

This, indeed, is the problem which had been troubling the Government of India for a considerably long period. At what point to attack this vicious circle ? Where to make a beginning ? They first attempted to collect morbidity statistics and for this purpose experience cards were made and other preparations were done ; but ultimately the project had to be given up as hopeless. They thereafter made an attempt to solve the problem from the side of framing an actual scheme: and Mr. J. H. Thomas, the then Superintendent of Insurance, opined in favour of " a process of ' intelligent guessing ' starting from known facts from other sources." The idea was that an experimental sickness insurance scheme, based on an intelligent guess of the expected morbidity rate, be framed and put into operation. When it actually begins to function, it will be possible to collect the relevant statistics and modify the original scheme and extend it to the entire industrial region with faith and confidence. It was in accordance with this decision of the Government of India that Prof. Adarkar was appointed to frame a sickness insurance scheme on intelligent guessing. It would thus appear that those who have criticized the Health Insurance Report on the ground that it is not based on actual statistics conveniently forget the history of the attempt made under the Government auspices to solve this problem, the circumstances which led to the appointment of Prof. Adarkar, and the nature and use of available morbidity statistics.

Much can, indeed, be said in favour of the approach finally decided upon by the Government of India and which has been worked out by Prof. Adarkar in his valuable report. A situation of this type is bound to be faced by any country which wants to set up a social or health insurance scheme for the first time. Britain is the singular case of a country which possessed morbidity statistics of the Friendly Societies to go by at the time the National Health Insurance Act was passed, but even there the assumed statistics were found to be out of tune with the actual experience. In other countries, of which Japan, Chile and Peru may be mentioned, the problem had to be solved in the manner in which it has been sought to be tackled in this report. Authorities on social insurance, including Sir William Beveridge, are all agreed that this approach is not only fair and sound but that it is inevitable and indispensable.

The correct angle from which the Adarkar Report has, therefore, to be examined is not if its author has used an adequate volume of reliable and representative statistics, but if his " guessing " is " intelligent." And here the Adarkar Report is on very strong grounds, and has received the solid backing and appreciation of the Vaidyanathan Actuarial Committee. The recorded statistics register the highest morbidity rate at the level of 14.6 and the Actuarial Committee have assumed that this would be the average rate in the case of India. This in itself leaves a good safety margin, for as 14.6 has been presumed to be the *average* rate, the highest expected rate goes much above this level. The method of " loading " has also been adopted. Then the scheme contains a number of reserves, published and unpublished, which would act as a cushion to any untoward morbidity developments. Prof. Adarkar says that he has assured himself that " there is a sufficiently large margin of safety in this regard by means of other checks." The judgment of the Actuaries who examined this report is that " the scheme detailed by Professor Adarkar is by no means an ambitious one and contains some important provisions for limiting the strain on the fund from chronic ailments which the experience in the United Kingdom shows is an important source of loss. The usual provisions relating to ' qualification period ' also provide a valuable safeguard and, due to their operation, the claims during the first two years of the scheme will be low and the consequent saving in outgo will enable the contingencies reserve fund being augmented. By the time the first actuarial investigation falls to be made, some valuable data will have accumulated, thereby enabling the actuaries to calculate the contributions with greater precision and also to make more accurate forecasts as regards the financial implications.



This charming photograph of " the water babies " shows children having a thoroughly good time in the pond—laughing, jumping in and splashing one another with water. This is a far healthier sport than playing in open gutters and drains.

The Industrial Worker in India

Benefits Received By Him

BY LALITA KUMARAPPA

(*Specially Contributed*)

Much has been written on the handicaps and disabilities which the industrial worker in India has had to suffer. There is no denying that they are many and serious, but that there is also another side to the medal is well brought out in the following article.—ED.

THE sensational 15-year Rs. 10,000-Crore Plan formulated by leading capitalists and industrialists for the betterment of our country and its people was much talked about and discussed, and still is. Some feel that it will be beneficial in the long run, for the standard of living will be raised—especially that of the poorer people. Others contend that the Plan will enrich those already rolling in wealth, while making the workers even poorer than they are to-day. The Plan outlines *future* benefits, but the general public is still in the dark as to what is being done *now* for the comfort and welfare of the millions employed in the various industrial and business concerns. It is my intention to outline briefly some of the facilities which are being made available to their employees by certain industrial concerns, and illustrate them with photographs which speak far louder than words.

Much is being done in the West, and especially in America, for the welfare of

This group of children shows an aptitude for sewing; hence they are being taught tailoring which will be their future vocation. Thus from adolescence onwards they are able to earn some money and not be a drain on their working parents.

those employed in various factories. A labour welfare programme is considered worthwhile for it helps the workers in many ways. Among its numerous activities we may mention a few of the most important ones such as applying to the management for an increase in the wages paid. More money means more material comfort, less worry, and greater satisfaction and contentment. It also makes for better health, and fewer absences from the factory. Satisfied workers are apt to be more loyal to the concern than discontented and grumpy ones. Thus, there is less chance of stopping or slowing down of production through strikes. Most human beings respond to kindness and good treatment. If the mill and factory hands feel that they are treated decently and are secure in the knowledge that they are indispensable to the smooth running of the business, and hence with rights and privileges of their own, they in their turn respond with an all-out co-operation and pride in their work. Instead of a nervous unstable element among the employees we find stability reigning supreme.

A health visitor calls on the wife of a millhand, and by winning her friendship and confidence, gathers the information she wants regarding her family's health—do they keep well on the whole or not—if not what is the usual trouble; the number of children they have; her health; how do they find their living quarters, sanitary arrangements, etc., to enable her to approach the management and ask for benefits for the workers to make their lot more bearable.

In this way, rich rewards are reaped by the clever, far-seeing industrialist whose business rapidly expands, with a natural and logical sequence, namely, larger and larger profits. The rather huge initial outlay and the losses which most business concerns are apt to show during the first few years after inception are what the short-sighted employer baulks at. He wants to accumulate as much money as he can for himself—in the shortest possible time. The well-being and happiness of those who work for him concerns him not a whit ! He

Children of the workers—employed by the Buckingham and Carnatic Mills attending nursery school classes provided by the mill management. They look busy and contented and also appear clean and neat.

does not realize that this is a foolish and short-sighted policy, and a thing of the past. Continuing along such lines to-day can only lead to disaster, for his employees will leave his factories and mills to work for those who not only pay him better wages, but also care for his health and contentment, as well as that of his wife and little ones, while providing for his future too!

Much needs to be done in India before we can come anywhere near the progressive industrial countries of the Occident in this respect. However, some of the many well-known industrial concerns of our country have made a start in the right direction. Though still in the early stages the results have been so gratifying that more should follow the lead.

The welfare work being done at present can be classified under the following heads: (1) Care of children, (2) Recreation and physical culture, (3) Better housing and sanitation, (4) Handicrafts and arts, and (5) Maternity care and general medical service.

In this article I shall deal briefly with the work being done for improving the lot of the employees' children and making it more bearable than hithertofore. Many concerns have set up *day nurseries* where mothers can leave their offspring during their working hours without having to worry as to whether they are safe; whether they are getting their meals; or being anxious about their health. Some of these creches provide free milk for the little ones. Others charge a nominal fee to those who can pay a very small amount (this is beneficial in a way because it does not encourage dependency and beggary. The parents are able to maintain their self-respect for they feel they are paying for what they receive, and it is therefore an attitude to be fostered). A trained nurse and a woman versed in the art of dealing with children are in charge. With the worry off her mind regarding her children, the working mother does far better at her work.

Literacy class for older girls in the Tata Iron and Steel Works, Jamshedpur.

The younger children of the workers of the Buckingham and Carnatic Mills, Madras, being instructed in simple outdoor games. Instead of playing each by herself, or with a chosen playmate, they are encouraged to join in the fun with many others. This makes for an outgoing, friendly disposition.

Also, there are schools attached to industrial plants where the older children of employees can study. Considering what a high degree of illiteracy prevails in India, such an arrangement is a step in the right direction, for it enables many children, who otherwise would not have got education of any kind whatever, to acquire at least primary and elementary schooling.

Some business concerns have workshops and handicraft centres where youngsters can experiment and thus find out their natural aptitudes. Frequently, it forms a foundation for future vocations. Carpentry, weaving, embroidery, painting and numerous other simple and easy-to-learn cottage industries are taught. At times a small fee is charged for the materials supplied, but the shop organizes periodical sales when each child is allowed to take the profits on his or her work. Thus, they come to value the money earned by labouring for it, instead of asking their parents for pocket money which comes easily and goes as easily.

The health of these children is not neglected either. The plant usually has a doctor, nurse, and welfare worker on its pay-roll to attend to the employees and their children. The latter are given a complete physical check-up yearly or half-yearly, and various recommendations are made for those who need them, and help is offered in carrying them through. Shower baths and bathrooms early instil the principles of personal cleanliness.

All little ones and teen-age youngsters are fond of games and sports. Facilities are provided to encourage the play instinct in right directions. There is a playground with sand-pits, slides, swimming pool, volley-ball court, etc. Team games are taught too in order to develop healthy rivalry, competitive spirit, loyalty, and co-operation with one's team-mates.

Children who have the above-named advantages are fitter, sturdier, and more alert—physically and mentally—than those who do not. The very good results obtained by some mills after establishing such facilities for the children of their employees should be an inducement for other large industrial concerns to do likewise. In a country like ours, where the State is not able to do enough to lift up the standard generally for its population, at least private bodies should aim to do their bit.

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The Manchester Chamber of Commerce, Annual Report for 1944

Mr. A. H. S. Hinchliffe on Problems Before Lancashire

IN the course of their Annual Report for 1944, the Board of Directors of the Manchester Chamber of Commerce, Manchester, England, observe as follows:

"There has been much reporting and discussion in cotton trade circles on the future well-being of the industry. The special Committee of the Cotton Board dealing with post-war problems issued its first public report in January. Although the Board has not participated in direct consultation, careful attention has been directed to all subsequent developments. This applies also to the comprehensive report on labour productivity compiled by the British Cotton Textile Mission which visited the U.S.A. and reported in October.

The past year saw the need for many consultations with the Cotton Board on the question of the 20 per cent. 'flexible' pool and the supplies of textiles to the Near East, to North Africa and to liberated countries in Europe. Other subjects dealt with covered not only straightforward allocations, but also the disposal of surplus goods or 'arisings' as they have now become known. In the case of 'arisings' which might go to certain countries in the Middle East, there was a conference in London with representatives of the National General Export Merchants' Group, the Cotton and Rayon Merchants, Association, and the London and Bradford Chambers of Commerce. The Board of Trade and the Cotton Board were also represented. This meeting was held to define certain procedure affecting the operation of the newly-formed Export Merchants' Guarantee Company, Limited.

In August, two important documents were placed before the Chairman of the Cotton Board. They concerned (*a*) the handling of Government surplus stocks of cotton and rayon piecegoods and yarns, and (*b*) arrangements affecting supplies of such goods to purchasing authorities appointed by the Governments of liberated territories. The objectives behind both were designed to ensure that goods would move through recognized channels and be handled by firms having a past trade performance with the respective markets."

The following are extracts from the speech of Mr. A. H. S. Hinchliffe, J.P., President of the Chamber, at the annual meeting held on Monday the 12th February 1945.

"The subjects I have selected for some elaboration are three: Export trade and full employment: closer working partnership between the scientist and the industrialist, and Lancashire's cotton industry.

"A lot of lip service is being paid to the need for a 50 per cent. increase over pre-war exports, without the essentials being revealed. But what is our next important consideration? I suggest it is a mixture of many things. And we are concerned about their order. What priorities will be laid down for different industries? What will be the division between home and export trade? Will there be free access to essential raw materials? Will labour be available at the right time?

"A proper balance between the allocation of the necessary plant, labour and raw materials is going to be essential to success. At present they are controlled by different Government Departments, and it is vital that there should be a proper liaison between those who control these three essential elements. Labour, raw materials and new equipment, etc., will not move into allotted spheres with automatic precision and equity immediately the fighting is over. As all requirements cannot be met simultaneously, some system of priorities and rationing must be retained for a while if these dangers are to be avoided.

Partnership Between Science and Industry

"Regarding closer contacts between the scientific mind and the industrial producer, I feel that in many sections of British industry we shall require, in the face of a changed world situation, to bring the inventive mind to aid the highest possible productivity of wealth in the form of manufactured articles. Why is the application of science to industry so particularly important at the present time?

"Firstly, it is imperative to make the most economic and efficient use of our indigenous raw materials—of which coal is the most important, affecting, as it does, the price of steel and nearly all our manufactured products.

"Secondly, we must be able to hold our own against the technical and scientific methods of production developing so rapidly in countries like America and Germany.

"Thirdly, taking the long view, we must bear in mind the competition to which we are likely to be subjected by nations whose standard of living is very much lower than our own.

"The Manchester Joint Research Council, formed a short time ago, is expected to provide Manchester with a most valuable medium for the interchange of ideas and for a working out of practical aids both to science and industry. Our friends from Manchester University are showing a very keen desire to get down to 'brass tacks.'

Lancashire Industries

"Now a few general remarks on the Lancashire cotton industry. There is no doubt that we must aim at securing an increased outturn of goods per man-hour; we must strive to create conditions and pay wages which will attract labour, and, so far as prices are concerned, to set up a suitable costs structure so as to provide a fair return to the producer and the distributor. At this turning-point in our affairs, we need a keen sense of responsibility amongst all sections of the trade, and a general desire to concentrate on the right objective.

"We are faced with a shortage of labour. This is not surprising—for two reasons. Owing to the fall in the birth rate, every age group in the country to-day is only about three-fifths of what it was 40 years ago. There are, therefore, fewer workers coming on to replace those going out. The raising of the school-leaving age, the need for vast numbers of extra teachers, and, probably, increased personnel for the armed forces, may be expected to reduce the pool of man-power for productive industry. On the top of all this, the more attractive conditions and prospects in newer industries make young people reluctant to risk their future in cotton. This is accentuated by much that has been written and said. It is imperative, therefore, if cotton is to remain a great industry, that it too shall be able to offer attractive conditions and prospects. If it continues to compare unfavourably with neighbouring industries in these respects, the cotton mills will certainly look for labour in vain. Moreover, these very conditions call for the maximum output from every individual for every hour of work. This can only be achieved by the closest study of up-to-date production methods to make output easy and remuneration high. The best plant is required if man's burden is to be eased and his standard of life maintained. The more expensive the capital outlay on machines, the more important that they shall yield their maximum output.

"With this in mind, the directors of the Chamber recently made representations to the Board of Trade recommending the establishment of experimental mills without delay, where management and labour alike could examine the possibilities of improving output, operating conditions, and remuneration, under neutral auspices.

"The views of the joint committee of the Association of British Chambers of Commerce and the Federation of British Industries receive very serious attention in Treasury circles, and of the concessions which the Chancellor has seen fit to give, some, at least, have almost certainly been inspired by it.

"The present, I suggest, is the right time for bodies like the Association of Chambers and the Federation of British Industries to advance reasoned argument in favour of substantial reliefs to be enjoyed by the industrialist. The demands which will soon be made for re-equipment and the reinstatement of workpeople, will place a heavy strain on the financial structure of thousands of units. It is true that there is to be a rebate of the excess profits tax, but that will only touch the fringe of the problem. Many firms, important to a peace-time economy, have paid no E.P.T. and some have been concentrated or otherwise put out of business in the national interests.

"I have heard it said that the capital outlay required for the re-equipment of industry will be so vast that private enterprise cannot tackle it. It is, of course, true that the resources left at the disposal of industry are not adequate to carry out all that should be done. But the full re-equipment programme will, of necessity, be spread over a long period. Allowing for machinery exports, it will probably absorb the whole output of the capital goods industry for years ahead. So there is time to accumulate the necessary resources if the opportunity is given. How is it to be done? If only some means could be devised to allow a differential rate of taxation for profits retained and spent on re-equipment within a limited period, the resources would be there.

"I am assuming that we all agree that industry thrives better with finance provided out of its own accumulated resources, rather than with a millstone of fixed interest prior charges. Nor do we want to see the control of productive industry pass out of the hands of producers to outside financial groups.

"The success of all our social schemes for full employment and prosperity will depend upon the release of pent-up enterprise of every kind, State as well as private. But private enterprise will be the main driving force—of course, I mean genuine progressive enterprise—and we must let it rip for all it is worth, at least so long as its activities are not anti-social. It will, no doubt, have to conform to a set of national rules, but the players must have scope to display their individual genius. Cricket has to be governed by the general rules of the game. But there would have been no Ranji if the leg glide had been barred by a controller, and no Johnny Tyldesley if the off drive had been banned by statute. The game was enriched by the individual genius of both, and would have died under single stroke utility batsmanship.

"Incentive must be provided for all participants. Conditions of labour must be such as to encourage workers to show keenness and get output. The adjustment of taxation must be carefully studied so as not to discourage overtime or turnover. I may seem to be harping on this subject. But there is surely something awry with our methods of taxation when the workers' hardest pound is worth the least and when it pays better to live in sin rather than in matrimony! That much-abused stimulus, the profit motive, still spurs ordinary men."

New Directors and Office-bearers

The following were re-elected directors of the Chamber: Mr. G. W. Armitage, Mr. Francis Grundy, Mr. H. M. Harwood, Mr. A. H. S. Hinchliffe, Mr. W. L. Jones, Sir William Clare Lees, Mr. Frank Longworth and Sir Edward Rhodes.

At a subsequent meeting of the directors the following officers were reappointed for another year: President, Mr. A. H. S. Hinchliffe; Vice-President, Mr. W. L. Jones; Hon. Treasurer, Mr. Harry Allcock.

Cotton Spinning 10

In the Mixing Room

By JAMES H. DAWSON, F.T.I.

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WHEN the stack has been properly built up (consisting of well pulled, and well mixed sections of bales) it is advantageous to allow it to stand a little while whenever it is possible to do so. In order to allow of this, many spinners run two mixings of the same quality, or preparation, using from the one while allowing the other to stand. As previously emphasized, the stacks (when in use) must be properly "pulled," and properly fed to the subsequent processes. To see that this is done (as hinted at in our last instalment) is a very important part of the duties of the managerial staff. So much is this so, that the writer has decided to introduce at this point some ideas upon "Cotton Mill Management" which he supplied to *Pitman's Textile Educator*, in 1927.

Cotton Mill Management

It would be the height of presumption to suggest that this article is intended to cover more than the fringe of the subject denoted by its title.

A man may serve a lifetime as a cotton mill manager starting with a fairly comprehensive knowledge of the business, and adding 25 per cent. to that knowledge each year of his career, still when he eventually retired there would probably be many things connected with the trade which he could still learn, provided he was inclined to carry on a few years longer. This explanation is necessary because the subject is too elastic to be dealt with in any other but a general way in an article of this description. There are many varieties of work undertaken by the different types of cotton spinning mills, insomuch that each type under those circumstances is really in practice a distinct and separate business altogether. The same argument applies to weaving mills, or *manufacturing* concerns as they are often termed. Therefore, a general survey of the management of cotton spinning and weaving mills is all that this article attempts to cover.

There is one other item which had better be pointed out at this stage, viz., the fact that the idea of mill management, as it is proposed to treat it, does not mean the duties of the manager only, but is intended to embrace the duties of all who may be interested in the successful running of the concern.

Necessity of Commercial Knowledge

The first essential in cotton mill management is commercial knowledge and a firm grasp of textile economics, coupled with a good idea of the usual results of the ramifications of international finance and its effects upon the foreign exchange markets. This is necessary because a large proportion of the cotton trade has to be done with foreign countries, and, to be altogether dependent upon outsiders for guidance in matters appertaining to dealings with those countries, either direct or through agents, during the purchasing of imported raw commodities or exporting finished goods, would be fatal to good management.

Practical Knowledge Required of Section of Trade Concerned

The second essential in cotton mill management is a thoroughly practical knowledge of that section of the trade in which it is intended to engage. By this it is inferred that it would be folly for anyone whose experience is limited to the spinning and weaving of North American cottons medium counts to go in for running a business in which the spinning of Egyptian cotton, super combed, and gassed yarns, was followed by the weaving of the most difficult of British fancy fabrics, on jacquard looms, and possibly mixed either warp or weft, or both, with worsted, or artificial silk. There would be nothing but disappointment in store for anyone who attempted mill management under those conditions.

A suitable knowledge of any one section of the cotton trade must include absolute familiarity with the buying of the raw materials; where to buy, what to buy, and how to buy; the processes of manufacture, the machines, and the workpeople; the selling of the product; knowledge of the world's requirements, and rapidity and accuracy in "costing."

Buying of Commodities

The buying of the commodities required in a cotton spinning and weaving mill constitutes almost a science in itself. Coal, oils, and solid lubricants; packing materials, boiler composition, cotton driving ropes, and belting, are only a few of the items which must be judiciously selected and bargained for, if the engineering department is to generate the power required to propel the machinery. To make certain that the best returns are being obtained from the use of these materials, the results must be tabulated, checked off, and compared, whilst constant efforts should be made to try and do better next week than the previous week.

Every week the revolutions of each engine per hour, must be entered up in the book kept for that purpose. The coal consumed per hour, per i.h.p.; the coal consumed per hour, per given quantity of yarn spun; the coal consumed per hour, per given quantity of cloth woven, and the equivalent in cost in money value, should all be ascertained and recorded. The cost of oils and all the other commodities should also be calculated from the same basis as frequently as possible, certainly every quarterly stocktaking, but oftener if convenient. Any noticeable jumps in the cost of any given commodity will denote either a falling off in its quality or the fact that proper supervision is not being maintained in its economical use. If it is the quality of the commodity that is at fault the remedy lies in the buyer's hands.

The same line of reasoning and the same governing principle run through the whole gamut of the mill's requirements with regard to raw materials and stores. Not only must the quality be kept up to a standard previously decided upon, but the constant supply must be arranged for and maintained. There must be no waiting, no running short, whilst at the same time there need be no carrying of big stocks, unless, of course, there is to be a commercial advantage, from the latter proposition. This is where the good general knowledge of the world's economic position is useful and helpful to the management in buying.

Commodities Influenced by Indirect Factors

No matter what the commodity is that has to be purchased, there are always a large number of indirect factors over and above the purely local or well defined factors, which affect the possibilities of the fluctuation in prices and variations in qualities. Good management will take into consideration all these outside influences and act accordingly. Wheat flour, corn and potato starches, minerals, chemicals, and many of the other ingredients used for sizing purposes, also cotton, may be included in this category. These are materials which are used practically all the world over, and for many of which to a very large extent the cotton trade is dependent upon foreign countries. Therefore, if the buyer can sense the atmosphere of the market governing these requirements before the daily papers publish the "position" for everybody who so desires to take advantage of, he can "get in" before the crowd, and avoid the "squeeze."

Selecting Quality of Commodities

Besides being able to buy at the right time, the buyer must know how to select the right stuff. No matter what is being bought, there is a right and a wrong quality to be had at the same price, and a right quality for which different prices may be asked. The different qualities are generally recommended as being quite suitable, and an attempt is usually made to show that the reason for the different prices lies in the fact that the higher priced article is possessed of some latent feature, which as a rule is invisible, except to the seller. The buyer must know exactly what he wants. He must know the fair market value of it on the day. He must not allow anyone who is interested in the sale to cause him to deviate one jot from his own personal and considered judgment. In order to be able to do this successfully he must be armed by the inside and practical knowledge of the intrinsic value of what he is buying. He must be able to judge what the commodity will do, and how it will act in practice, for, after all, *that* is the crucial test.

Details Affecting Buying of Cotton

When buying cotton the buyer must know exactly what his machinery is capable of. He must know the extent of the cleaning power, in his blowing rooms and card rooms. He must know what his draftings and settings will deal with satisfactorily. He must know the pulling strength and elasticity required in the yarns he has to spin, and the desired appearance of the cloth (both in the grey state and in its finished state) he has to weave. He should then be able to select his cotton so that he can attain any desired results, without any doubt or difficulty, whilst at the same time not giving anything away to the purchaser of his product. In selecting his cotton he will be guided also by the desire to ensure that the percentage of loss in waste will not exceed what he has already allowed for in his calculations. Further, he will always have his opinions in the judgment of the foregoing points, confirmed or otherwise, by a careful recording of the results. Periodical tests of cotton are necessary to ascertain each kind of loss.

The following losses may be specially mentioned:—Moisture, tares, droppings at every cleaning point in blowing-room machinery (all machines up to the end of the finisher scutcher), waste from cards, viz., licker-in-droppings, card fly, strippings from the flats, and cylinder, and doffer; sweepings from the card-room, mule room, ring room, winding room and weaving shed. Further the data from these periodical tests should be checked off at every stock-taking.

Besides this, the manager should occasionally have a bag of every sort of waste (that has been packed up ready for delivery to the waste dealer) cut open again, and the contents gone through by some independent, and reliable person, who should examine same, and see that no loss is being incurred on the sales of waste contract.

Examination of Other Commodities

Similar care to that specified previously should be devoted to the selection and consumption of every other commodity. Sizing materials should especially be kept up to an agreed standard, otherwise trouble is bound to ensure. Healds and reeds are also important factors in the production of quantity and quality of cloth, and although the prices that prevail are generally pretty close together for given counts of heald yarns and knitting particulars, still there are varying degrees of quality of the same counts of yarns, and of the efficiency of the manufacturing of the " gears." It, therefore, behoves the buyer to see that he gets the best at the price. Space prevents any further treatment of the interesting and important subject of " buying " as it affects the management of mills.

Machinery

The designs of cotton spinning and weaving machinery, for treating the various classes of cotton have been so carefully thought out and elaborated that provided the machines are properly erected, the parts thereof accurately " set ", and the whole steadily driven, there need not be any fear that undue difficulty will be encountered in turning out a sufficient quantity of a given quality of product per hour so long as the raw materials, etc., are kept up to the standard required.

The machinery must, of course, be kept clean and well lubricated, and in thoroughly good working order. It must be properly and regularly supplied with all the requirements that go to keeping the machine efficient, such as good belting, ropes or bands on all machines that require them for driving purposes. All knock-off motions and regulating motions must be kept as near perfect as possible, especially the regulating motions in blowing-rooms and the knock-off motions on drawing frames. Winding frames, beaming and warping frames, and warp and weft stop motions on looms should not be forgotten in this respect.

All drawing or drafting rollers in the spinning section should be well cared for. Steel rollers must be kept free from " soft laps," and leather covered rollers so kept that their surfaces form a real gripping contact with the steel rollers. The surface of leather-covered rollers must be kept smooth and pliable. There must be no lumpy piecings, no hollow places or grooves. Neither must the cloth underneath the leather get too hard; otherwise the cushion effect is lost. All rollers must be kept free to revolve easily without any semblance of unnecessary friction from any cause whatever. Neither lack of oil nor dirt in the necks or on the pivots should be allowed to militate against the free and easy motion of the rollers. Moreover, the best of roller leather and cloth coupled with the most up-to-date roller covering methods, and practice are the best in the long run. All through the processes the same attention to detail must be observed on the lines described.

In the winding and beaming processes every effort must be expended in producing a beam that is free from crossed ends, big knots, slubs, or lumps of any kind. It must be comprised of threads which are all wound on at as equal a tension as it is possible to obtain. This must be done so that, where it is unwinding at the sizing frame, every end will come forward and be wound on to the weaver's beam in such a fashion that, when the strain (set up during the shedding operation of weaving) comes upon the warp yarn, every end takes its share. There must be no slack ends to spoil what would otherwise be a good " sheet " of yarn.

Workpeople

Most of the desirable features suggested, which ought to be obtained from the machinery are to a very large extent dependent upon the will of the workpeople whose duty it is to attend to the said machines. So much is this true that perhaps it would be right to say that one of the most important problems of the whole business lies therein. It is quite obvious that to the workpeople we must look very largely for the measure of our success or otherwise.

In the hands of those who tend the machines must necessarily lie the key to the efficient running of the machine, and it is to the efficient running of the machinery that we look for the fullest measure of our success.

Good management will, therefore, see to it that as far as ever possible, good and conscientious workpeople are engaged, and that everything is done in reason to assist them in carrying out their duties to the best advantage. Most cotton operatives are engaged upon piece-work, and it therefore follows that the bigger their production the more wages they earn. This with a few may be somewhat of an incentive for them to allow their product to suffer in quality but not with many.

As a rule, the workpeople take a pride in their own particular section of the industry, and they try their best to turn out both quantity and quality, quality of course up to a certain point. The workpeople have an idea of what will pass muster, but the standard is usually the one set by the management, and, provided it is not impossible to obtain this standard from the material supplied and at the same time to earn the prevailing average wages there is seldom, if ever, any trouble or difficulty in getting the quality required. Given the quality and the quantity which, it must be assumed, has been produced under circumstances to enable the cloth to be bartered at a price to cover all costs and allow a margin for profit or return on the capital invested in the business, and provided the sales are sufficient to enable the machinery to be kept constantly running, stopping only for the legal holidays, then the management may be heartily congratulated upon having carried out most of its functions.

Finally in order that the management shall reach the absolute peak of efficiency, there is another very desirable feature.

It has been pointed out previously that machinery and workpeople should be kept well tuned up. Everything must harmonise throughout the concern; there must be no discord. In these modern days when the workpeople and the principal servants of many of the departments are organized into separate bodies, which are termed trade unions, but which are really only unions of the various sections of the trade, it is often very difficult and sometimes impossible for the management to obtain the results desired. This is due to the fact that the rules and regulations of many of these so-called trade unions specify what their members

(*Continued on page* 469)

Cloth Shortage and How to Meet It *

Practical Suggestions by Millowner

BY SETH VADILAL LALLUBHAI, *Ahmedabad*

IT would appear that Indian mills at present produce about 4,800 million yards of cloth and handlooms another 2,000 million yards. It includes all varieties of cloth. Out of this exports and Government requirements account for about 1,500 million yards. It may be that the rich and higher middle class people do not feel the shortage of cloth. But large masses of people, which includes the lower middle class, are daily clamouring for more cloth at cheaper rates.

The Government has established a Control Board and is trying to encourage increased production. It has been making attempts at better distribution of cloth. The Government machinery has been working for a considerable time with no appreciable result. The millowners, according to their statement, are doing their level best to increase cloth production to the maximum. The results shown by the textile mills as far as profits go are very satisfactory.

To the man-in-the-street three things are clear: huge profits of textile mills; huge amounts collected by Government in the shape of taxes, and huge profits made by persons operating in black markets.

As against this, the appeal of the poor for more cloth goes unheeded. Many suggestions from time to time have been made by millowners, by Government, and by other people either for larger production or for better distribution or for lessening the evil effects of the black markets. Government officials and millowners issue series of statements but the man-in-the-street is none the better for them.

In dealing with the question in a concrete way, certain suggestions are now offered to Government and to the Textile Control Board and if both these bodies take action on the basis of these suggestions, the sufferings of the poor can be alleviated if not completely removed.

The suggestions are:—

That the production of mills should be increased. Instead of 4,800 million yards Indian mills should produce 6,000 million yards or more, and that, too, of more durable varieties. The production of very fine cloth should be reduced and of less fine and a little coarser kind of cloth should be increased for the following reasons. This will not reduce fine count cloth production, but it will make it a little less fine.

The finer the yarn the more the turns that have to be given, and so less yardage and poundage in yarn is produced per spindle correspondingly. Fine cloth requires more reed and more picks and fine counts yarn is less strong than coarse counts yarn. Every mill must be compelled to go at least 20 per cent. coarse to begin with. To " go coarse " to a greater extent would entail difficulties in the frame department. However, it is possible to produce more poundage in the frame department to a certain extent. The position differs in different mills but we can easily ensure that 20 per cent. heavier rovings are spun on an average. This percentage can be increased later on.

The present system of producing cloth is to have coarser warp and finer weft, and so there is a double disadvantage in the production of cloth: the strength of the cloth is lessened weft-ways, and unnecessarily more picks have to be given. This should be avoided by making the weft coarser than the warp from the same cotton mixings or better mixings so as to give a much stronger weft than now, in such a proportion as to make the strength of the cloth distributed in warp and weft both ways, in order to ensure that the cloth is durable to the utmost limit and would tear both ways simultaneously. Using better mixing would also help in the production of further coarser rovings and extra poundage. This should be planned by scientific testing of different cloths selected for mass production. This will help in revising the specifications of the cloth in the direction of coarser weft with less picks than at present, but of stronger construction. This will give us more yardage and more cloth of strong construction.

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* This article was written several days before the latest meeting of the Textile Control Board which has since proposed several measures for increasing production.

In certain qualities of cloth unnecessarily heavy reed is given, which is a waste of yarn. This should be stopped. The width of cloth should be standardized in order to stop waste in unnecessarily wide cloth. To-day thousands of sorts are allowed to be manufactured. This should be standardized into a few sorts on mass production basis with standard specifications and standard counts. This will increase production and improve quality and strength. Unnecessary width of cloth also will be eliminated.

Instead of producing several counts, counts should be standardized for each mill. Standard counts should be laid down from which the mills can select and no permission to produce finer or coarser counts than those laid down should be given.

There are many mills which are not working night shifts. The causes should be investigated. These mills should be encouraged and if necessary compelled to go in for double shifts. The tax allowances for depreciation and profits are such that some very old mills have no interest in producing more cloth, because if they run double shifts, they think they will be the losers by wearing out the machinery to an extraordinary extent. Whatever inducements they require should be given to them for increasing their double shifts.

Hand spinning and weaving should be encouraged by liberal grants and popular support for such production should be obtained. This will give an additional income to several thousands of needy persons and constitute a large production of cloth by the poor for the poor. In the scheme for distribution, the help and guidance of popular agencies, and not of interested persons only, should be obtained.

Surplus U.S.A. Cotton Mills Sent to Brazil

FOR some time the United States Government has encouraged the export of redundant machinery and industrial equipment to Latin America, and especially to Brazil. As there is a considerable shortage of cotton spinning and weaving machinery in Brazil, Brazilian manufacturers are greatly interested in acquiring surplus plant from the United States, says the *Manchester Guardian*. For American manufacturers such sales are not without attraction. Owing to the acute shortage of textile labour much plant is at present idle and there is little likelihood that the American cotton textile industry will be able to work at full capacity before the end of the war with Japan. By that time production of new textile machinery will have returned to almost normal, and mills which sell their equipment now to Latin America have every prospect of replacing it by new and more modern and efficient machinery.

The sale of several complete American cotton mills to Brazilian manufacturers has recently been reported. In conformity with its general policy the United States is not opposed to such sales, but in order to prevent sales of plants needed in the war effort, the War Production Board has recently issued a directive which prohibits the dismantling of cotton mills without specific authorization by the Board's Textile, Clothing, and Leather Division. These authorizations are refused if the mills to be dismantled produce "needed fabrics." This ruling has now for the first time been brought into force. A company which operates a number of cotton mills in Alabama intended to ship three entire mills to Brazil. The dismantling of the plant, however, has been forbidden by the War Production Board, and instead the three plants have been ordered to produce 1,000,000 linear yards each of cotton drills, sheetings and osnaburgs during the next three months.

How Different Agencies Share in the Prices of Cotton Goods

(Specially Contributed)

SOME rather astonishing figures were recently published concerning the proportionate shares of the final prices of cotton goods received by growers, spinners, manufacturers, makers-up and distributors in America. They are taken from a study of the subject made by the United States Bureau of Agricultural Economics.

Quoting from the study, Mr. Claude Wickard, Secretary of Agriculture, stated that in 1939 cotton growers received, for every dollar which the consumer spent on cotton goods, not more than 7½ cents. The remaining 92½ cents were made up as follows: –40.8 cents represent the trading margins on the finished cotton goods, of which the wholesalers receive 8.2 cents and the retailers 32.6 cents. The next largest item, 29.9 cents, represented the receipts of the manufacturers of apparel and household goods. Another 10.5 cents were accounted for by the spinning of the yarn and the weaving of the cloth, while the dyeing and finishing of the cloth absorb 8.5 cents. The balance of 2.8 cents covered the ginning and baling of raw cotton (7 cents) and the merchandizing of the raw cotton (2.1 cents).

Percentages are notoriously dangerous facts on which to base conclusions, but it does seem at first glance that the share of the final prices received by the growers, spinners, and manufacturers are low compared with the shares of makers-up and distributors and that economies should be possible in the cost of merchandizing.

The Bureau of Agricultural Economics believes that the margins at all stages of the trade from the ginning and baling to the retail sale of cotton manufactures can be considerably reduced, and it makes a number of practical suggestions including the use of more efficient machinery and equipment, greater efficiency in the utilization of labour, more standardization, smaller numbers of patterns, more efficient trading with fewer privileges and concessions to trade buyers, and more simplified services to the final consumers.

The conclusion of the Bureau must be of interest to spinners and manufacturers inasmuch as they indicate that the limits of mechanization, standardization, and rationalization of production have still not been reached by the American cotton manufacturing industry and if such is the case in the United States an even more fruitful field for progress on similar lines exists in India.

Profits and Taxation

IN the course of his speech at the latest annual general meeting of the Colaba Land and Mill Co., Ltd., Bombay, Sir Joseph Kay, Kt., observed as follows:—

"Once again the bulk of the year's profit goes to meet the heavy calls for taxation, leaving—as Government had planned—only a sum approximately equal to the standard profit for distribution, resulting as was to be expected in a somewhat lower dividend than last year. With this and the lowering of selling prices of cloth and yarn, we cannot under present conditions have any complaint, but I must warn shareholders that with the speeding up of the collecting of taxation, combined with the payment in advance of income-tax, much of the large liquid resources which we have had at our command for the last year or two is being taken away, and this must naturally lower our standard profit in the future. Should the war continue and the present system of taxation be maintained, we shall finally arrive at the stage where we shall almost be back to our basic standard years, which were not very good ones, because as you will remember the industry was only then recovering after a long period of depression.

But signs are not wanting that the war in Europe, at any rate, will be brought to a successful conclusion before many more months are over, and it should not be long after that before business begins to resume a more normal course, and in my view the sooner these fantastic earnings, indicated in so many directions, are brought to proper and reasonable levels the better it will be for everybody, and we shall have decent and honest trading once more. With this naturally comes what proportion of the industry's earnings are going to be claimed for taxation to meet the country's demands for the improved world in which we are going to live, and I submit it is not too early for Government to declare its long-term policy, so that business men, and particularly industrialists, can frame their schemes for the development and extension of industry. We realize, of course, that profits must be taxed, but our concern is whether or not Government have in mind the immobilizing of profits once the excess profits tax is taken off."

Planning Industry's "Switch Back" in England

Future Production Schemes

By GORDON SCHAFFER

MR. Hugh Dalton, President of the Board of Trade, has been telling me about his plans for rebuilding post-war industry in Britain and for preventing any reappearance of the distressed areas which were so ugly a feature of the immediate pre-war years.

Mr. Dalton has a particular interest in this problem, for he was a member of a Labour Party Commission of Investigation into the distressed areas during the worst period of unemployment.

After the war has been won, the Board of Trade intends to play an active part in industrial development, in contrast to its pre-war policy when industry was left to its own devices and the Board of Trade intervened only as the Department concerned with receivers in bankruptcy.

The first principle of Dalton's plan is to make maximum use of local initiative, and to avoid what he described as a "Whitehall bottleneck." Britain has been divided into 13 regions, in each of which the Board of Trade has appointed a controller. These men—all with business experience—will be members of the existing Regional Boards, which have played an important part in developing war production. Representatives of the employers, the trade unions and the Government Departments concerned with the supply of munitions all sit on the Regional Boards. When the war is over, it is anticipated that the Board of Trade will displace the Production Ministry, while the Ministry of Aircraft Production and the Ministry of Supply working with the Ministry of Labour will carry on the Regional organization as a machine for dealing with the problems of peace. Local knowledge and initiative will be allied to Government action.

The Regional Commissions have been given four immediate tasks. They will supervise the handing back to industry of factories requisitioned for the war effort and will allocate Government factories to approved firms as they become vacant.

They will use every possible means to ensure distribution of new industrial enterprises in the former distressed areas and will be responsible for keeping the Government supplied with statistics of industrial activity.

They will have a general responsibility for the reconversion of industry to peace production, with particular attention to engineering, which has been changed out of all recognition by the demands of war.

Finally, their duties will include supervision of the reopening of factories compulsorily closed down under the Government's war-time policy of concentrating into single units the various peace-time industries. These industries, mostly supplying consumer goods, have had to be cut to the bone because of shortage of man-power and materials.

Thus the Regional Commissioners will have the main responsibility of carrying out the policy laid down in the Government White Paper on employment of "steering industry into the areas which call most urgently for further industrial diversification."

A Bill will be brought before Parliament giving the Government certain new powers in this direction. Various inducements will be offered to industry and the aim will be to prevent any single area from relying on one industry. Thus in the post-war world it is hoped to avoid the peace-time situation when whole districts became almost derelict areas because the industry giving them life had collapsed. The north-east of England and South Wales will require special attention and steps will be taken to send to these parts, some of the newer light trades to balance the heavy industries.

Meanwhile, Mr. Dalton is encouraging preparation for peace-time production. Firms are being granted "prototype" licences, under which they will be given facilities for the construction of samples of the goods they wish to sell.

Lighting in Indian Mills and Factories*

BEFORE the war, lighting was not a problem which commanded serious and immediate attention. Relatively few Indian factories and workshops needed to resort to artificial lighting except to augment deficient day-lighting, and to provide minimum pilot-lighting for watch and ward. In consequence, their artificial lighting systems are generally incapable of providing the standard of illumination necessary for night work. The problem of artificial lighting became real and acute when industries had to be mobilized for war production, and when night work in factories became the rule rather than the exception. The problem was further aggravated by the obscuration measures undertaken to comply with the lighting restrictions. The result was of serious consequence to war production, and the question of welfare of labour had literally to be shelved for the time being.

While the Governments in the U.K., U.S.A. and Australia recognized the importance of lighting for production purposes and for the amelioration of working conditions in factories engaged on war production, we in India could do very little indeed, primarily because of the lack of materials, but also to a large measure because of the lack of planning and appreciation of the necessity of good artificial lighting by the industry concerned.

It is likely that after the war night work in factories will continue to a considerable extent, especially in the textile industry. This will probably at least set off the reduction in night work in factories now producing munitions of war which will mostly either close down or revert to the production of consumer goods.

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* Extracts from paper read by Mr. N. S. Mankikar at the Conference of Chief Inspectors of Factories in India, held at New Delhi towards the close of last year.

The value of good lighting in a factory is beyond dispute, whether it be from the point of view of labour welfare, accident reduction, improved quality and increased output; and it is interesting to note that in some of the modern well-established Indian factories, the lighting installations with minor alterations can even be brought up to standards of illumination recommended by the Illuminating Engineering Society. But in a majority of the older factories it may be found necessary to scrap the existing lighting arrangements completely, and instal a new system in their place. In others, it may be possible to augment the illumination by providing additional light points interspaced between the existing lights. The main deficiency in even some of the existing fairly satisfactory installations is with regard to the spacing of the light points. Modern lighting practice is to provide fairly uniform illumination over the whole working area. For this the light points must be arranged symmetrically, and not spaced too far apart, the spacing depending on the mounting height and the type of reflector used. General lighting combined with local lighting may be necessary both from a practical and economic point of view in shops where high values of illumination are required for fine and exacting detail work; but it is essential to consider local lighting as supplementary to the general lighting system, which should provide the required minimum illumination throughout the interior.

The issue of statutory orders specifying the minimum standards of illumination will help employers in India to understand their obligations under the Factories Act, and will widen the attention paid to conditions of industrial lighting. It will also arouse interest and appreciation of the importance of this subject, and this should surely lead to the provision of desirable standards rather than the mere legal minima.

Any considerable increase in lighting must be accompanied by a corresponding increase in temperature. About 70 per cent. of the energy supplied to a clean incandescent lamp is radiated as heat, and allowing for absorption of some of this radiated heat by dirt on the lamp and reflector it is probable that each 200-watt lamp is responsible for radiating about 100 watts of heat downwards towards the operators. With illumination values of the order of 6 foot-candles, the problem is hardly one which would call for any special attention, but with higher values of illumination of the order 20 to 50 foot-candles and over, particularly in work-rooms with low ceiling, special provision may be necessary for mitigating the heat radiated from the lamps. In particular cases where suitable electric supply is available it may be possible to get over the difficulty by the use of fluorescent tubular lamps, which emit very much less heat. The temperature of the tube of a fluorescent lamp is comparatively low (about 120° F in a normal industrial reflector) and, therefore, a large proportion of the heat generated by the lamp is dissipated by conviction currents in the surrounding air, a lower proportion being radiated with the light. The fluorescent lamp is twice as efficient as an ordinary tungsten filament lamp, so that for equal light output the heat radiated is only 1/4 or 1/5 as much. The use of fluorescent lighting in factories is a development of the last few years and because of its advantages over ordinary incandescent lamps, has spread very rapidly in America and U.K. and is likely to expand further by leaps and bounds after the war.

Textile Institute Conference

"Dust in Cardrooms"

THE subject of the Annual Conference of the Textile Institute, which was held in Manchester, England, on 18th November 1944 was "Dust in Cardrooms." The Conference was officially opened by the President of the Textile Institute, Mr. T. H. McLaren, and the chairman during the morning session was Sir Wilfred Garrett, H.M. Chief Inspector of Factories. During this session the medical side of the subject was very ably discussed by Prof. F. E. Tylecote, M.D., whilst in his paper "Measurement of Air Pollution," A. R. Meetham, M.A., D.Phil., shed light on the problem from the scientific point of view.

Prof. Tylecote, a member of the Byssinosis Administrative Board, presented a paper prepared by the Board. It was suggested that permanent disability due to byssinosis, an affection of the respiratory system, from which cardroom workers are liable to suffer, could be diminished by:—

(1) Medical examination of all entrants to the cardroom with the object of eliminating those predisposed to or actually suffering from chest trouble.

(2) Re-examination at the end of twelve months' work in the cardroom, with the object of eliminating those who have proved abnormally sensitive to cardroom dust.

(3) The worker seeking advice at the first suspicion of chest symptoms in order that a change of occupation may be considered and that remedial steps may be taken such as the institution of suitable breathing exercises, which properly and regularly carried out may prevent the development of emphysema which is an important factor in the causation of their later permanent disablement.

(4) Purification of the atmosphere in which these workers are employed.

Extraction of Dust from Cotton by Modern Opening Machinery

The afternoon session opened with a paper, "Extraction of Dust from Cotton by Modern Opening Machinery," by Mr. H. McGill, B.Sc.Tech., of Textile Machinery Makers Ltd. Mr. McGill pointed out that dust is liberated from cotton in blowing rooms and at carding engines. At present it is the object of textile machinists to ensure that the maximum quantities of all impurities are removed before the cotton is made into laps, thus providing clean cotton for the carding engines and eliminating dust entirely in the cardroom.

The whole problem of inside circulation of air and the cleansing of same requires to be thoroughly investigated, and, incidentally, will be investigated in the new types of blow-room equipment which will be available in the future, as also will the total enclosure of blowing room machines. To do this the design of the machines will have to be radically altered; there will have to be more air ducts, fans, etc., preferably under the floor.

All this takes time and a considerable amount of careful thought and study, but it is hoped that in the future, perhaps not too far distant, opening and lap forming machines will help to solve this problem of dust.

It is the aim of textile machinists to provide machines which will remove all the dust and impurities prior to making a finisher scutcher lap, no matter how dirty the cotton is in the bale.

The blowing room, said Mr. McGill, was the Cinderella of the spinning mill, and he could not quote an instance of any firm completely renewing its blowing room machinery after a certain number of years.

Dust Extraction in Relation to Ventilation and Air Conditioning

The second paper of the afternoon session, "Dust Extraction in Relation to Ventilation and Air Conditioning," was by Mr. H. W. S. Martin, M.I.H.V.E., of the Institute of Heating and Ventilating Engineers. Mr. Martin stated that it is only by the close co-operation between the textile manufacturers, the textile machinery manufacturers, and the ventilating engineers that a satisfactory solution of the problem can be found.

Mr. Martin then described methods of ventilating and air conditioning cardrooms and, concluding, he said one of the problems facing the textile industry at the moment was its inability to recruit sufficient labour. The industry could and must be made more attractive by a general improvement in the working conditions. Dust extraction and air conditioning would not only give more pleasant and healthy conditions but would also give a better product and increase the productive capacity of the plant and the operative.

* * *

Post-war Exports of Indian Textiles

Prospects of the Canadian Markets

IMPORTANT facts on India's cotton textile industry were presented by Mr. M. R. Ahuja, Indian Trade Commissioner in Canada, during an address before the Canadian Allied Textiles Trades Association recently. He discussed production, exports, disposal of Indian raw cotton during the post-war period and war goods production. He expressed the opinion that Canada, after obtaining manufactured goods from Britain and the United States, would buy from India in preference to other foreign sources, since the trade balance on textiles was very favourable to Canada. Dumping of merchandize in export markets would, he said, be avoided.

Post-war Exports

"Although India would naturally desire to develop her export trade, she has every intention of doing so in co-operation with and for mutual benefit of both India and her foreign markets. She has no ulterior motive in developing her exports and she is fully conscious of the evils of dumping from which she herself has suffered in no small measure. In developing her industries, including the textile industry, her sole anxiety is to help raise the standard of life of the teaming masses of India which would enable them not only to live a better life but also consume in larger quantities goods which are outside their reach at present.

"Canada is not self-sufficient in her production of textile materials and is largely dependent on supplies from the United Kingdom and the United States. Although these two sources will no doubt continue to supply Canada I believe that she would need in addition certain types of cloth which she would be willing to buy from India in preference to any other foreign sources.

The market commentary of the *Canadian Textile Journal*, from which the above extracts are taken, observes:—

"It is doubtful if India would be successful in selling her entire cotton goods production in the home market. Efforts will be made to develop trade in low and medium quality goods with other countries. According to Mr. Ahuja, India has no intention of dumping her textiles in Canada or elsewhere, where they may prove to be low priced and thus lead to cut-throat competition. There is also the related problem of selling India's cotton in world markets during post-war years.

"In more specific terms the Trade Commissioner said that during 1941-42 Canada's imports of cotton and its products from India were valued at $200,000, while her exports of cotton textiles to India during the same period were valued at $1,000,000. He expressed the opinion that Canada would need Indian cotton textiles in addition to imports from other sources. All this suggests that the question of trade with India will require careful examination, since her costs of production are low and domestic enterprise might be adversely affected, as it was when Japan operated freely in the Canadian market."

J. K. Industries Annual Sports at Cawnpore

U. P. Governor Distributes Prizes

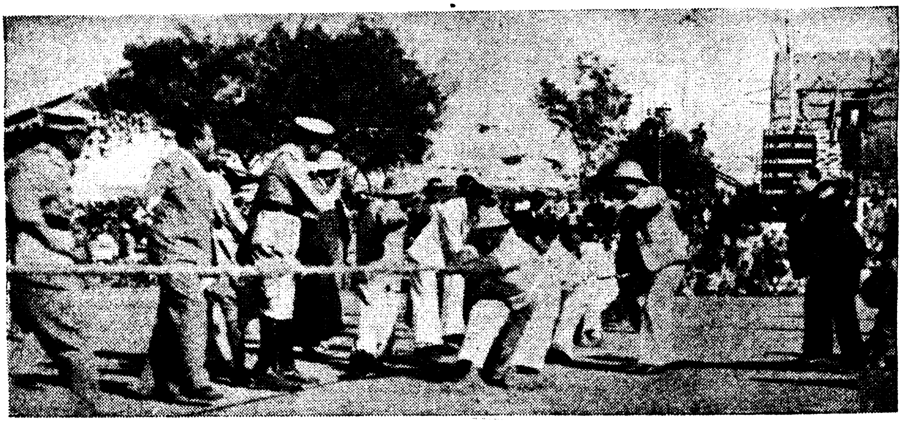
THE 9th annual sports of the J. K. Industries were recently held at the Kamla Club grounds, Cawnpore, in the presence of His Excellency Sir Maurice Hallett, Governor of the United Provinces, who also distributed prizes to the successful participants in the various games and sports.

Mr. S. M. Bashir, President of the club, in welcoming the guests, reviewed the activities of the club in a short speech. " The year under review, like other years, has been one of steady progress. The membership has increased and, with it, its income. Members have been taking keen interest in both outdoor and indoor games and sports. Cricket was introduced last year and I am glad to remark that while only two teams took part last year, more have joined during this year. In volley-ball, hockey and football, our teams rank high and the standard of games is improving regularly on account of good combination. While in the above games our teams have won many well-known tournaments, our cricket players have done their part and helped the industrial team to annex the gold cup of the Pentangular Tournament, the only one of its kind played on non-communal lines.

" Apart from games and sports, the club also conducted *kavi sammelans*, *mushairas*, festival celebrations, dramatic performances, etc., which have been a regular feature in the past. Meals or gifts have been given to workers on festival days. The dispensaries have done splendid work and have treated and cured thousands of workers. Research work has been carried out in corneal grafting of eyes in the Eye Hospital.

Lala Kailashpat Singhania presenting a purse of one lakh of rupees to H. E. the Governor of the United Provinces

" The mutual help and co-operative societies gave the workers relief not only from heavy indebtedness, but from usurious interest which in some cases was as high as 500 per cent. Literacy schools have been opened by the mills, and female and adult education is being encouraged regularly. Some of them have also creches for the babies. Canteens have been opened in the mills in order to provide clean and cheap food. Sanitary inspectors have been appointed to look after sanitation in a scientific manner. Cinema shows and magic-lantern slides are being shown to the workers. Above all, a drive towards



Officers *vs.* Supervisors in tug-of-war

Prizes and trophies for winners in the various sports

closer contact with workers has been started, and this has shown marvellous results."

Sir Padampat Singhania's Speech

Sir Padampat Singhania, Governing Director of J. K. Industries, speaking next, thanked the Governor for the great interest he evinced in "fostering fellow-feeling between the employers and the employees, in creating harmonious relations between them, as also the promoting of well-being of labour. He also congratulated the workers who have "worked day in and day out to manufacture goods required for the fighting forces in the various theatres of war. You have counted no sacrifice great, no ordeal severe and no pains or efforts beyond you, and given all that was best in you for accelerating the war effort. Yours has been a noble and magnificent achievement and you have stood steadfastly by the signpost of duty undeterred by all considerations, political and economic."

Sympathizing with the hardships of the brave Indian soldiers in the various arenas of war, Lala Kailashpat Singhania, handing over a donation of one lakh of rupees to His Excellency for the benefit of disabled soldiers who had suffered from enemy action, requested His Excellency to use the amount in whichever way he deemed fit.

His Excellency the Governor's Address

His Excellency in his address observed that labour welfare activities should really aim at making the workpeople "keep fit and healthy." He emphasized the need for recreation and physical training to workers and pointed out how he had recently started a Physical Culture Council which he felt sure would assist in encouraging and helping all attempts at physical culture. He also urged employers of labour to keep their labour force happy and contented and to see that there is contact and co-operation between all workers in a factory, those at the top and at the bottom. "'A sound mind in a sound body' is a school motto in English, and we must have that objective in India."

His Excellency then distributed the prizes to the winners and runners-up. *Dhotis*, shawls, handbags, holdalls, suit-

Ladies' thread-and-needle race

cases, tiffin carriers, cycles, household utensils, etc., were some of the prizes distributed; they also included silver cups and trophies, the special shields for hockey and cricket and the championship cup being worthy of special mention. It is estimated that prizes worth over Rs. 15,000 were distributed that day.

Distribution of sweets to women workers

2nd Annual Sports

The Osmanshahi Mills Limited Nanded

Mrs. Tyabjee distributing sweets to childre

THE Workers' Welfare Committee of the Osmanshahi Mills conducted the second annual sports day for the workers of the mills on the 16th March 1945 on the mill sports grounds. Among the distinguished visitors were the Managing Agent, Mr. Camar S. Tyabjee, Mrs. Tyabjee, Nawab Syed Shahbuddin Khan Saheb, First Taluqdar, and other local officers and the elite of the town.

The celebrations started in the morning with the distribution of sweets to the women workers of the mills and their children by Mrs. Tyabjee. In order to encourage workers to keep their homes tidy and clean, the Committee had arranged for a "Home exhibition" and prizes were awarded.

The competitors showed great skill in the various sports events, and prizes in the form of cash were awarded for the first four places. Apart from cash prizes, cups and shields were also presented to the inter-departmental teams who were successful in football, hockey, volley-ball, badminton, tug-of-war, and relay race. A championship cup was also presented by Mr. and Mrs. Tyabjee to Abu Baker, a worker from the weaving department, who scored the highest number of points.

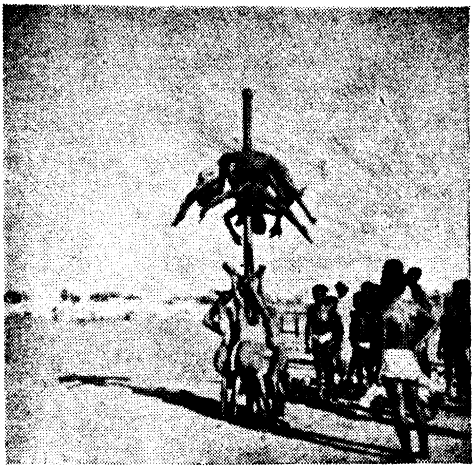
After the conclusion of the sports, Mr. M. A. Ghafoor, Secretary of the Workers' Welfare Committee, presented the report for the current year. A notable feature of this year's activities of the committee is the introduction of adult education among the workers. The Secretary's report observes: " By this scheme we shall not only teach them to write the alphabet, but by constant group lectures on matters of topical interest we shall be educating them to understand world affairs, health and decent living, importance of savings, and the art of thinking and many other allied matters."

The Welfare Committee have done useful work by holding this year a special tournament to encourage workers to take active interest in Indian games, and also by holding a " Baby show " to encourage mothers and impress upon them the importance of bringing up healthy children. The committee's work in the other fields has also been noteworthy; the mills have a well organized canteen, facilities for sports and recreation, entertainment, etc.

The following extracts from the Welfare Committee's report speak for themselves :-

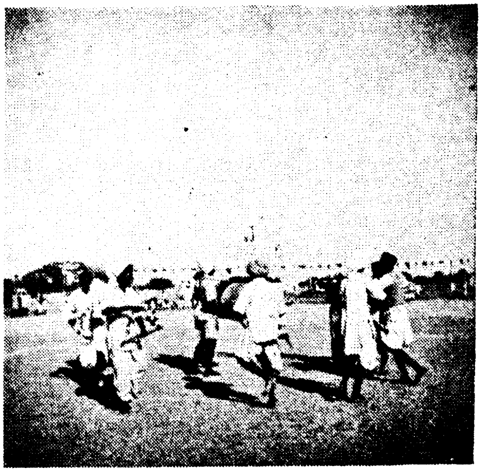
" The Welfare Committee studies and examines the needs of the workers from time to time and makes recommendations to the management in matters relating to internal working conditions, living conditions, workers' grievances, promotion of industrial harmony, stability of labour, adequate wages and allied matters. The scope and work of this committee will be enlarged with the cessation of hostilities when H.E.H. the Nizam's Government will themselves sponsor plans for the welfare of industrial labour, the spade-work for which has already been taken in hand by them.

" Such facilities as decent housing, adequate sanitation, efficient medical attention, education and recreation are not within the reach of every worker. The management through the Welfare Committee have been investigating and examining various schemes in these directions. The mill canteen which is run by the Labour Welfare Committee is catering to the needs of our workers to a great extent. To relieve industrial fatigue they are being supplied tea, *pan*, aerated water, etc., at very nominal prices. The canteen not being a trading concern, quality of the stuff is unquestionable and preparations are made under hygienic conditions. We

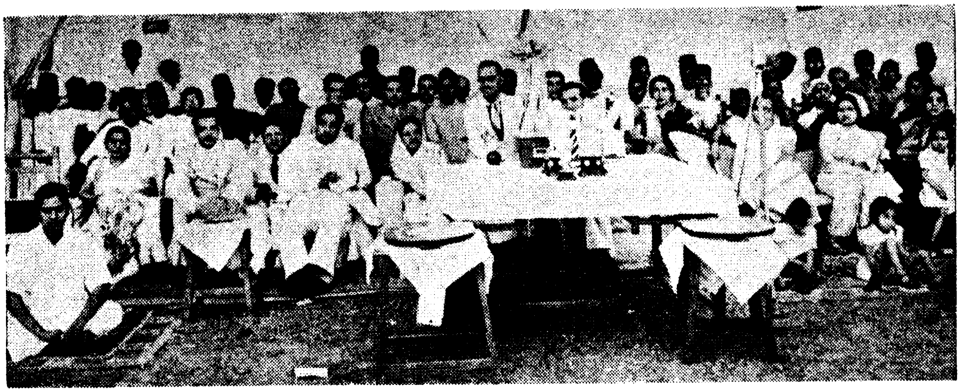


Feats by school children

Pole vaulting



Folk dance



Watching the Sports from the Pavilion. *From left to right* :—Mrs. Tarapore; The District Judge, Nanded; Mr. C. S. Tyabjee, Managing Agent; The District Collector, Nanded; Mrs. C. S. Tyabjee; Mr. E. J. Tarapore

have also provided a drinking water-shed, where cold water specially cooled in earthen pots is served to all the workers free of cost.

" In order that our workers may not misuse the cheapness of articles sold from this canteen, which not only prove detrimental to their health but also result in their wages being drained, we have a regular check by which no worker shall be able to get from the canteen more than is normally required. We have also in mind the question of serving cooked food, and healthy drinks like milk, buttermilk, etc., from the mill canteen, but we have deferred this for the time being. When the new building for canteen, which is now under construction, is completed, we shall take up the matter of serving cooked food and refreshments to our workpeople, as this will be of immense use to those workers who are attending mills from long distances and those who are living without their families. We have already provided a pucca dining hall for our workers to take their food.

" In the field of sports we have left nothing undone. We have realized the importance of recreation for our workers in some form or other to relieve the boredom of work and fatigue. We have a sub-committee to advise and make recommendations to the Labour Welfare Committee on matters relating to sports activities. This is in charge of Mr. M. M. Shaikh, assisted by Messrs. M. A. Ghafoor, A. N. Ghose, Radhakishenrao and K. Ramamoorthy. We have provided games like football, hockey, volley-ball, badminton. Indian games such as *auta pata*, wrestling, etc., have not been ignored. We have provided a gymnasium with an instructor, and the response from our workpeople been really admirable.

" In the month of November, last year, we organized a wrestling tournament, as an experimental measure to feel the pulse of our workers' interest in Indian games. The response was astonishing not only in the number of entries but also in the great skill displayed by the contestants. We have now decided to make this event an annual feature.

" We have a radio set with loudspeakers in the mill chawl to entertain and educate our workpeople. We have recently installed a radio set in the mill premises also, so that workers during the recess period can have good entertainment and keep themselves in touch with world affairs. We feel that useful work could be done by lantern lectures on matters relating to health and by exhibiting educational films, and for this purpose a cinema projector will be a very useful addition.

" Our management have already plans to provide a reading room, library, a meeting hall for our workers and these things have been given due places in the new housing scheme, which we have taken on hand.

" Apart from educating our workers, we have also felt the necessity of keeping them nearer to the mills so that everyone could have very easy access to the various activities we are promoting from time to time. For this purpose we have a housing scheme costing several lakhs of rupees, which when completed will house every worker of our mills. Experimental blocks have been built to proceed with the work on the experience gained, but our construction work has been delayed on account of war conditions which make it really difficult, if not impossible, to obtain necessary materials.

" The education of the children of our workers has also been given its due place. We have a primary school for our workers' children, where we impart education in two principal languages largely spoken in the State, i.e., Urdu and Telugu. Arabic and Persian are also taught. To induce children to attend the school in large numbers, we are giving uniforms, books, slates, etc., free of cost to all the children, and we have now nearly 200 pupils on the rolls.

" Apart from a qualified medical officer with long experience, we have also on our staff a qualified and experienced compounder, a dresser, two nurses and two ward boys. As many as 13,412 workers were treated in the dispensary during the year 1944 with an average daily attendance of 65, besides some serious cases that were attended to at their homes.

" A noteworthy feature of this year's addition is the baby creche. This has been housed and well furnished in a building specially designed and constructed for this purpose. The babies are left at the creche where they are taken care of by the nurses and ayahs in an enlightened atmosphere. They are given clothes, food and milk free of cost. Children between the ages of 2 and 5 are also admitted in the creche."

Mr. E. J. Tarapore, Chairman of the Workers' Welfare Committee, addressing the gathering, said:—Labour Welfare in industry is now considered one of the prime factors in the management of industrial relations, and it is being now realized more and more that just as it was necessary to lubricate and grease the moving parts of an engine so it is equally necessary to conserve human energy. He stressed the importance of savings and said that they have inaugurated a savings scheme, which would prove of immense help to the workers in times of depression and need. He said that the other activities such as reading room, library, co-operative credit society will be taken in hand in due course. He thanked the members of the Welfare Committee and other workers for striving hard to make the function a success, and requested Mrs. Tyabjee to distribute the prizes.

Mr. C. S. Tyabjee, Managing Agent, then addressing the workers, said:

"I have been very much impressed by this evening's display in the realm of sports. This year has been a year of peace for this mill and I hope that this co-operation will continue. I want to assure you that your happiness is my happiness (cheers.) What has been done so far is only the beginning of the welfare schemes that we wish to introduce. I would very much like to see—I shall leave no stone unturned to see—that every worker in our mill knows to read and write in a very few years. The building scheme has been delayed for want of materials. However, I can assure you that in a couple of years you will see the whole thing springing up and I shall be very very happy to see that every worker of ours lives peacefully and happily in his own little house in the colony.

"Working in a mill also requires stability of service and I think it would be a very good idea to draw up a scheme of provident fund for the workers, so that when they retire, when old age comes, they will have some money with themselves.

"One of the welfare schemes I would introduce here is the cinema. I think the cinema medium is very important for welfare workers and as soon as circumstances permit, you will have one."

Nawab Syed Shahbuddin Khan Saheb, First Taluqdar, Nanded, appealed to the workers to maintain strict discipline. He advised them to realize the good that is being done by the management for their welfare, and carry out the instructions of their officers implicitly as they had nothing but their (workers') welfare at heart.

Mr. M. M. Shaikh, Sports Secretary, proposed a vote of thanks to the guests and workers.

The function came to a close with a delightful "At home" to the competitors and guests.

Cotton Spinning—No. 10

(Concluded from page 457)

may do whilst at work, and also some things that they *may not* do. There is a difference of opinion as to the wisdom or otherwise of many of these hard and fast rules, and perhaps it would be better if there was more elasticity allowed, so that those immediately concerned could be the judges of the likely consequences of their own actions.

The management would be largely assisted if some such understanding were possible, especially in view of the many variations and fluctuations in the state of the trade and the varying circumstances. In many cases members of the management staff have very often to perform duties, occupying time that could be spent to better advantage to the firm, owing to the fact that it is a case of doing it themselves, leaving it undone, or else paying extra money which they know the state of the business at the time will not allow of. The obvious conclusion, therefore, is that all members of the management staff who are not confined within the limits of the rules of the trades unions, should pull together whenever there is anything out of the usual to be carried through. It does not assist good management in the least for any particular section to first do the least that will pass muster.

Fine-weather sailors are not much use in the cotton trade. During stormy weather it must be "all hands on deck, and a determination to give a long pull, a strong pull, and a pull all together."

The Mechanical Engineers' Association (India)

Silver Jubilee Conference in Bombay

THE Silver Jubilee Annual Conference of the Mechanical Engineers' Association (India) was held at the B.E.S.T. Conference Hall, Bombay, on the 17th and 18th March 1945, under the presidentship of Mr. T. R. S. Kynnersley, O.B.E., M.C., A.C.G.I., M.I.E. (India), M.Inst. C.E., M.I. Struct. E., Chief Engineer, Concrete Association of India and President of the Indian Roads and Transport Development Association. After the inaugural speech delivered by Mr. G. F. S. Collins, C.S.I., C.I.E., O.B.E., I.C.S., Adviser to the Governor of Bombay, the annual general meeting was held, followed by a discussion of papers. Among the papers put down for discussion we may refer to, " Air Pre-heaters," by Mr. P. K. Bharucha, S.M.M.E.A., Krishna Mills, Beawar; " More Power from Existing Boiler House " by Mr. K. H. Patel, B.Sc.Eng., A.M.M.E.A. (India); " Selection and Purchase of Machinery " by Mr. M. H. Mehta, B.Sc., B.Sc. (Eng.), A.M.I.E., M.M.E.A., New Cotton Mills, Ahmedabad; and " My Uniflow or Central Exhaust Engine " by Mr. L. N. Vyas, Vijaya Mills, Ahmedabad.

The Origin of the Association

A small group of engineers of Akola, Central Provinces, headed by Mr. A. V. Kolatkar (including Mr. T. S. Ashtikar, Mr. Mahlur Govind and Mr. M. D. Bhagwat) conceived the idea of forming an association in 1914 at that place. About the same time, a similar association was formed at Amraoti on the initiative of Mr. V. N. Sahasrabudhe, now Inspector of Boilers, C.P. and the late Mr. G. D. Apte, the then Superintendent of the Technical Institute, Amraoti. The two associations merged into one in the following year carrying the name of " The Mechanical Engineers' Association, Berar." By 1917, the late Mr. Dhundiraj Thengdi joined it, and its activities covered almost the whole of C.P. and Berar.

The late Mr. F. G. Westmooreland, the then Chief Engineer of Messrs. Ralli Brothers Ltd., was elected President of an association called Mechanical Engineers' Union of C.P. with some engineers of Nagpur. Since 1920, annual conferences of this association were held regularly every year, the first one at Akola, being presided over by Mr. Thengdi. The second conference was held at Amraoti in 1921, and the third on 20th August 1922 in the Town Hall at Nagpur, under the presidentships of Mr. T. R. Pardhi and the late Rao Bahadur G. R. Kothare. The last was attended by many distinguished guests including the Ministers of the C.P. Government. At this conference it was decided to start a monthly publication of the Association in Marathi, and the first issue came out under the title " The Magazine of Mechanical Engineers' Association of C.P. and Berar." Mr. L. N. Chorghade of Akola was the Editor, with Mr. P. R. Jaiwant of Nagpur, the translator, and Mr. D. R. Thengdi as the scrutinizer. Owing to the infant stage of the Association it had no funds for this purpose and it lingered for some time. With the generous help of Mr. A. V. Paranjpe of the Central Trading Agency of Bombay, in the beginning, and later on of that of Mr. W. Y. Samudra of Akola, it pulled on. This venture was a success for Marathi-speaking engineers. The two gentlemen undertook to print, publish and deliver free 300 copies per month to all the members of the Association, including postage, in the beginning for two months and later for one year. However, the scope of the Association and its journal was limited.

The fourth conference was held at Khamgaon on the 2nd September 1923, when some engineers from Bombay, Gujrat and Central India joined the Association. The conference was presided over by Mr. Fakirjee E. Bharucha, who was then the Assistant Director of Industries to the Government of Bombay. In his presidential address he expressed that " this Association should extend its activities to all the provinces of the country and that this be turned into an all-India body." His suggestions have since materialized.

About the year 1923, the Central Government came out with certain proposals regarding the employment of certified engineers in charge of steam boilers and engines. This was considered to be a bad change by the mechanical engineers from the point of view of efficiency and safety in the management of steam plants. As a sequel to this, the mechanical engineers of Bombay mills, numbering about 125, held a public meeting on 25th November 1923 under the presidentship of the late Mr. N. N. Cooper to express their considered opinion with regard to the said amendments.

The Mechanical Engineers' Association of Ahmedabad was started in 1923. At the inauguration ceremony Messrs. H. F. Bamji, Framji Dorabji Kapadia and other leading engineers from Bombay were present. The late Mr. Ramchandra Nursey, M.I.M.E., was elected President. Nearly all the engineers of the Ahmedabad mills, numbering 80, were enlisted as members. Mr. M. M. Vyas was elected Honorary Secretary. The principal activity at that time was the consideration of the proposed Indian Boilers Act. Various suggestions, protests and memorials were submitted to Government regarding the proposed provisions in the new all-India measure called the Indian Boilers Act. In the beginning the progress was slow as much spade-work had to be done.

Affiliation with the M.E.A. of C.P., Berar and Khandesh.—In about 1926, the Ahmedabad Mechanical Engineers' Association was affiliated to the Mechanical Engineers' Association of C.P., Berar and Khandesh. In 1928 Mr. Ramachandra Nursey expired and Mr. M. M. Vyas was elected President.

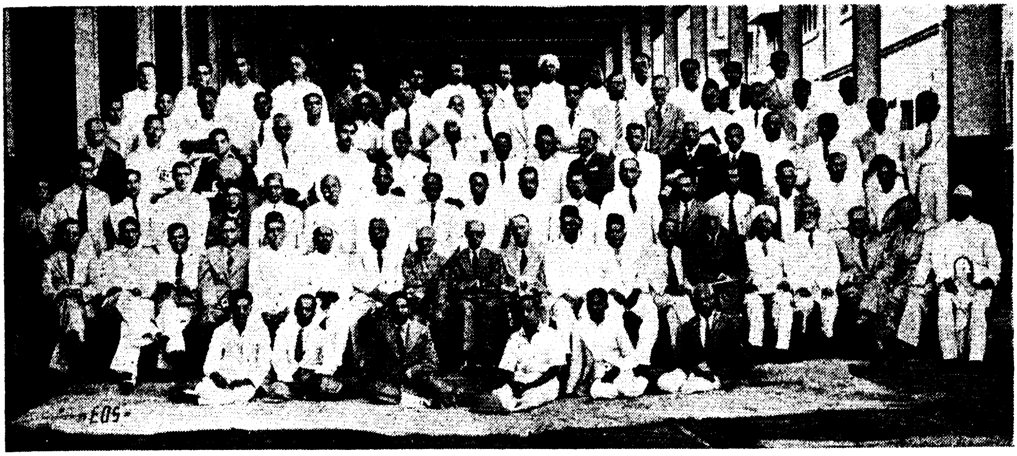


Photo: EOS Studio, Bombay

Photo taken on the occasion of the Silver Jubilee of the Mechanical Engineers' Association (India) at B.E.S.T. Hall, Bombay, on 17th March 1945

Library and Meeting Room.—In 1933 arrangement was made with the Ahmedabad Textile Association to share their library and reading room. Having obtained a permanent room for meetings, lectures and discourses were arranged periodically. Unfortunately the Ahmedabad Textile Association was wound up in about 1935 and the Mechanical Engineers' Association was again confronted with the problem of having a library and a meeting room. Negotiations were opened with the Mahajan of the Maskati Market, and ultimately the Mahajan was good enough to accommodate the library and also to permit the use of their meeting room. Thereupon it was resolved to purchase books on engineering and science subjects of the value of Rs. 1,000, and the cupboard containing the books is placed in the public library of the Maskati Mahajan. Mr. Fakirjee E. Bharucha has presented a full set of his publications which are so valuable to all engineers. Mr. M. D. Patel, Engineer of the Jupiter Mill, has also presented all the volumes of his work on turbines published in the Gujarati language. The engineering library has 63 books at present.

Annual Conference of 1934 *and Affiliation with the M.E.A.* (*India*).—The annual conference of 1934 was invited to Ahmedabad and it was a great success under the presidentship of Mr. I. S. Malik, I.S.E., the Municipal Engineer of the Ahmedabad Municipality. It was in this year that the Ahmedabad Mechanical Engineers' Association was affiliated to the Mechanical Engineers' Association (India).

By the end of 1944 the Association had 17 life members, 53 members and 16 associate members and 12 student members.

A memorandum signed by about 125 Ahmedabad mill engineers was submitted by Mr. Richard Vaz, Engineer, Swadeshi Mills, Ahmedabad, to the then Governor of Bombay in May 1923, about the impending changes in the "Indian Boiler Act," but as the reply to them was not satisfactory, the Ahmedabad engineers also joined hands with Bombay and sent another protest. Several other engineering bodies also sent their opinions to the Government.

Though the purpose on hand could not be served by the above congregation of engineers, it nevertheless gave a strong urge to evolve a Central All-Indian body of mechanical engineers on sounder lines to organize it in such a way as to assert itself so as to be able to cultivate a strong opinion on matters relating to mechanical engineers.

The fifth conference was held at Wardha, Mr. S. G. Narwane presiding. It was at this conference that a permanent fund was started to publish a monthly magazine as Journal of the Association and the Akola branch was empowered to manage it. Mr. V. G. Vidwans was the Secretary of the fifth Conference.

As a sequel to the above, the sixth annual conference organized by the Honorary Secretary, Mr. D. B. Kane, was held at Dhamangaon. This was the first combined conference representing C.P. and Berar Associations as well as that of Bombay Presidency. The conference was presided over by the late Mr. N. N. Cooper who was made the permanent President of the Bombay Association. The President made an appeal to the audience to combine all the separate associations of engineers and to consolidate them into one "All India Association" of Mechanical and Electrical Engineers, etc.

In 1926 Mr. S. H. Thakar, the then Inspector of Steam Boilers, presided over the conference at Dhulia and the late Mr. S. M. Dighe, Inspector of Steam Boilers of Baroda State, was the President at Akola in 1927.

This effort materialized in 1928 when both Bombay and C.P. Association finally merged in the Mechanical Engineers' Association, C.P., Berar and Bombay Presidency, and held their joint sessions in Bombay under the Presidentship of Dr. G. W. Burley, the then Principal of the V.J.T. Institute of Bombay.

In the subsequent years, combined annual sessions were held at Poona, Wun, Nasik, Sholapur, under Messrs. L. K. Kirloskar, Haskel, K. M. Mehta, and N. Vembu. Upto 1933 the Association's work was carried out by Messrs. A. V. Kolhatkar, V. V. Oka, V. N. Sharshabudhe, L. N. Chorghade and M. D. Bhagwat, to whom the

Association is highly indebted for its present existence. In 1933, these combined associations formed themselves into an all India body opening their branches at about 20 centres all over India, with the head office at Bombay.

In 1934 under the guidance of Mr. Fakirjee E. Bharucha, permanent President, and the member of Council at the head office, Bombay, new rules and regulations and by-laws were framed and the status of the Association was raised. It was registered under the Societies' Registration Act, XXI of 1860, in Bombay and separate grades of honorary members, full members, associate members, associates, and students were formed on the basis of other advanced and well-established foreign institutions.

The monthly Marathi magazine was abandoned and an English magazine (Monthly) was substituted, edited by our President which has been approved and appreciated by the members and the membership has now increased to more than 1,400.

In the same year the All-India Annual Conference was held at Bombay under the presidentship of Mr. W. D. Bradford, A.M.I., Mech.E., A.M.I.E.E., Chief Engineer of the Bombay Dyeing and Manufacturing Co., Ltd., with delegates from all the centres in India and the following objects were approved by all of them: promoting the general advancement of engineering science (civil, mechanical, electrical, etc.), and its application to India, facilitating the exchange of views, ideas and personal experience regarding applied subjects amongst the members of the association, maintaining local centres in several important provinces with a view to giving equal facilities and opportunities to up-country members to enjoy the rights and privileges of the Association, and publication of a monthly journal, *The Engineer*. Thereafter the annual conferences have been held every year regularly.

Position of the Post-war Handloom Industry

MR. R. Rama Iyer, Sri Meenakshi Mills, Madura, writes:—

Recent speeches made by Sir Ardeshir Dalal in Madras and elsewhere encourage millowners and capitalists to install weaving departments in the mills in the post-war industrialization of India. No doubt, the attempt is a well-directed one. But the dumping on India of reconditioned textile machinery of the pre-war and improvised types when compared to the reconstruction schemes carried on elsewhere with a view to capturing the colonial markets as an outcome of the present war is worthy of note. As a result of the war and scarcity of imported clothing materials coupled with the awakening of the national consciousness of the Indian people some fillip has been given to the handloom industry.

With respect to the textile industry of India in the future it would be well to realize that self-sufficiency on a nation-wide basis and industrialization from the cottage can alone avoid catastrophes ahead. Many competent men have tried to link up the handloom industry with the power-loom without precipitating any conflict in their spheres of trade.

I should like to make a suggestion. A considerable portion of the working class in villages are in one way or other connected with individual or collective forms of handloom weaving. The present control schemes can be well utilized for future planning as a guidance.

(1) Production on a nation-wide mass-scale of standardized qualities for mass consumption, with full Government—both central and provincial—control and direction.

(2) The manufacture of costlier and varying materials of both domestic and aristocratic qualities—especially for home use, women's garments of Indian style, domestic qualities of artistic and æsthetic qualities.

The above two groups can be well considered by separate committees and be divided between the mill industry and handloom after taking into account the conditions and environments of the particular areas. Mass production of the specified qualities being directed to the mills, for mass consumption, and the domestic and quality fabrics of rare and varied nature to the handloom central organization under Government control and direction.

The proper division of cloths for manufacture on economical basis and the effective control through central organizations to obviate conflicting problems are the main items for consideration. The central, provincial and district organizations for the handloom scheme shall supply raw materials, give specifications according to marketability, give technical guidance and supervision to small handloom groups; and they themselves should be a ready market for such products. In addition, all such goods can receive the necessary finishing, marketing labels, etc., besides a thorough inspection by a technical staff before despatch. In reality the district organizations should supply raw materials and purchase finished goods and dispose them of at their own risk for that particular group.

Other private weavers are not in any way barred from having their own trade, nor are they debarred from seeking help from such organizations. Such private weavers are not bound by the rules of the organizations as regards quality and specification of their fabrics.

The cultivators and agriculturists have a considerable portion of the year at their disposal. They can be induced to utilize their leisure hours and days to the manufacture of ordinary varieties of cloth for village consumption. This will raise their standard of living. They will not be bound to the district organization and their work will be for the most part seasonal. On their behalf the district organization can market their goods.

This kind of linking-up of agriculturists with middle class handloom weavers; setting up of a separate skilled class with Government direction and finally leaving the major portion of the weaving industry for mass lines to the mills is worthy of careful consideration.

Twenty-five Industrial Panels Set Up

Textile Control Board to Act for Cotton Mill Industry

OUT of 29 panels proposed to be set up to make recommendations to Government on the development of industries, both existing and new, 25 have now been constituted. On receipt of the reports of the various panels and in consultation with Provincial Industrial Committees, the overall plan of industrial development for the country for the first five-year period after the war will be decided upon.

Each panel will be given the target to be aimed at in the first post-war five-year period and, wherever possible, of the target to be reached within 15 years. For example, the Iron and Steel (Major) Panel is expected to plan for an increase of 80 to 100 per cent. production in the first five years. A 50 per cent. increase in textiles and 100 per cent. in cement have also been indicated. For the textile industry the Textile Control Board will act as the panel.

The following is the personnel of some of the panels:

Heavy Chemical Industries: Sir Shri Ram (*Chairman*), Mr. Kapilram Vakil, Dr. M. S. Patel, Messrs. Seshasayee, S. G. Shastry, and P. R. Crerar (members).

Electro-Chemical Industries: Sir J. C. Ghosh (*Chairman*), Messrs. Kenneth Hall, M. S. Patel, Kapil Ram Vakil, Parker and Dr. B. K. Ram Prasad (members).

Silk: Mr. N. Rama Rao (*Chairman*), Messrs. R. Peychand, H. Pullman, Rutnam and Bose (members).

Coir, Rope and Cordage: Mr. Karunakaran (*Chairman*), Messrs. W. G. Grant, M.L.A., and Rutnam (members).

Hosiery: Mr. H. G. Misra (*Chairman*), Messrs. H. R. Dande, A. K. Chowdhury, Fakhruddin, Firth and A. W. Tatlow (members).

Ready-made Clothing: Mr. S. Jajodia (*Chairman*), Messrs. Khanke, Wachel Molla, and Narendra Singh (members).

Wool: The Hon'ble Lala Ramsaran Das (*Chairman*), Jivandas Bhawandas, W. R. Watt, S. Ratnam, J. C. Lal and A. K. Watal (members).

Industrial Plant and Machinery: Mr. G. L. Mehta (*Chairman*), Mr. K. K. Birla, Mr. S. L. Kirloskar, Brig. Cox, Mr. Malgaokar, Mr. P. F. S. Warren and Mr. Barraclough (members).

Machine Tools: Sir Lakshmipati Misra (*Chairman*), Sir Dhunjisha Cooper, Mr. S. L. Kirloskar, Mr. J. Hodkinson, Dr. Seth, Mr. Latif and K. B. A. G. Khan (members).

Rayon and Artificial Silk: Dr. Nazir Ahmad (*Chairman*), Mr. M. Subba Rao, Mr. P. N. Sinha, Mr. M. P. Bhargave and Mr. Gautam Sarabhai (members).

Plastics and Celluloid: Dr. John Matthai (*Chairman*), Dr. S. Siddiqui, Mr. Akbar Fazalbhoy, Dr. M. S. Patel and Dr. H. K. Sen (members).

The panels will start work immediately and will be supplied with factual information by the Government. In the case of new industries, the information will consist of the nature and scope of the industry and its importance to India. In the case of existing industries, the information will naturally be more comprehensive and, besides a general survey of the present condition of the industry, will indicate the targets to be aimed at.

General Directive

A general directive is being issued to each panel to report on the scope and extent of development; whether the industry should be State-owned either on grounds of national interest or because private capital is unlikely to take it up; the capital required for development; the extent to which technical advice from abroad may be necessary; the manner and the degree of co-operation with foreign firms both as regards capital and management; the location of the industry; the nature of assistance required from the Government in the form of protective duties, bounties, research grant, expert advice, etc.; the control that the Government should exercise in the case of private ownership; whether the industry should cater for the export market and whether it should develop, as in Japan, on the cottage industry basis, and, if so, to what extent.

The personnel of each panel includes persons prominently associated with the industry concerned and one or two experts and also those who by their general knowledge of trade and industry are likely to be useful as members. The panels are not meant to be representative of any particular industrial concern. They are expected to get into touch with all industries concerned as also with the Industries Committees of the Provinces and major States.

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Australian Textile Industry in Wartime

By ALEX J. BENNETT

(Specially Contributed)

THE founding of the Returned Soldiers' and Sailors' Co-operative Woollen Mills at Geelong, in Victoria, Australia, as an aftermath of the World War of 1914-18 may be looked upon as a criterion of what will no doubt eventuate in industrial Australia when the present world conflict draws to a close.

By fully describing here the founding and launching of this mill—locally known as " The Diggers Mill "—by a few returned soldiers of the last war we present to the reader an all-over pattern as applicable to all the textile enterprises which have arisen throughout the Commonwealth of Australia. These firms have been able not only to meet all the requirements of their own and other fighting forces but have also met the needs of the civilian population of Australia.

The eighth day of April 1920 saw the birth of an enterprise which is now firmly established, which has proved that the Digger is a man of business as well as a warrior, and which holds almsot limitless possibilities of expansion.

This notable addition to the industrial activities of Geelong and Australia, for it is a Commonwealth concern, had its inception at the Returned Soldiers' Club, Geelong, in 1920. This idea appealed so strongly to those before whom it was first placed that it was decided to summon a general meeting of all returned soldiers to consider it, when 200 Diggers of the district attended and learnt of the project. As a result of this meeting it was decided to form a company and provisional directors were appointed in the persons of Brigadier General Smith, Mr. E. J. Fairnie, Rev. Charles Neville, Messrs. Norman Belcher, A. J. Freeman and J. F. Swithenbank. Mr. D. P. C. Wilson, General Manager of Dennys' Lascelles Ltd., was added to the Directorate at a later stage on the appointment of Mr. E. J. Fairnie as Secretary. There were, of course, the " Doubting Thomases " outside—men of little faith. Not every Digger saw the possibilities of the enterprise; not every member of the public bestowed a blessing on the decision of the Diggers who had the faith and the foresight to put their hard won Gratuity Bonds into the business. Unlike the sceptical ones they did not think they were taking on more than they could carry out. Time has shown which was the correct view.

The company accordingly came into being. Its objects were to erect a woollen and worsted mill in Geelong; to supply shareholders with a limited quantity of cloth per annum at cost price and to cater for other trade, to employ returned sailors and soldiers, and widows and dependents of returned men in all departments from the front office to the last loom, as far as consistent with the financial success of the undertaking. These objects have been fulfilled.

There was naturally a tremendous amount of spade-work associated with the inception of an enterprise of this kind. The propaganda work was entrusted to Mr. E. J. Fairnie, the present Secretary, who was appointed Acting Secretary and Chief Organizer.

Returned Soldiers' Mill: Humble Start

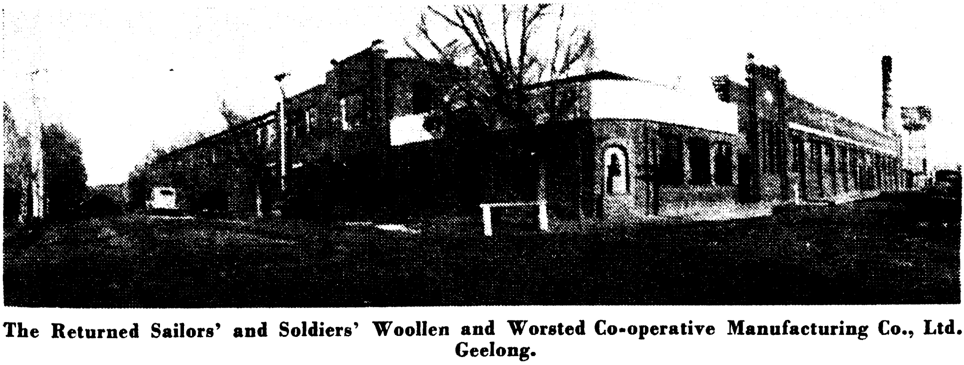
The start was a humble one, the first office was a room which was taken next to the Soldiers' Club, and the sole furniture thereof consisted of a couple of chairs and a table two feet square. Here a big campaign was launched by Mr. Fairnie and the business was tackled thoroughly, and with a few exceptions every branch of the League in Victoria was personally visited and the proposition placed before them. New South Wales also was the object of his personal attention, and very successful meetings were held in that State, as well as throughout Victoria. The results in both States were of the best. This sort of work, of course, took much time and strict attention to every detail. When a meeting was to be held in, say, Melbourne, a visit would have to be paid a week beforehand and arrangements made for the gathering, another journey would be necessary on the appointed date to conduct the meeting.

While this was going on, preparations were also being made for a start with the erection of the mill. An excellent site was secured on the banks of the Barwon River at the bottom of Pakington Street, Chilwell, and the area for the purpose embraced 14 acres. It is interesting to reflect that close to the very ground where the "Diggers' Mill" now rears its solid structure, was built the mansion of a personage who played an eminent part in the history of the district, namely, Captain Fyans, one of the most notable of Victorian pioneers. On the site of the "Diggers' Mill" the first eight sheep brought to this State were landed.

It had now become necessary to consider the appointment of a permanent manager; and the choice of the Directors fell upon Mr. A. Schofield whose experience included over 17 years at the Albion Woollen Mills, Geelong. By tradition Mr. Schofield was marked out for a textile expert from the very start of his career as his family had for generations back been concerned in the making of cloth. It was resolved that he be sent to England to purchase approximately £70,000 worth of machinery; and so Mr. Schofield visited the famous West Riding of Yorkshire—the heavy woollen district of the north—and the great textile machinery foundries of Lancashire. As a consequence there are to be seen at the mill to-day the most up-to-date products of the textile engineering brands of Oldham, Huddersfield, etc. The visit of Mr. Schofield to the Old Country meant a saving to the company of between £6,000 and £7,000. The policy of the Directors was to buy as much machinery as possible in Australia; but textile machinery is not a thing in which experiments can be indulged in with safety, hence it was necessary to secure most of it from England for the simple reason that it was not manufactured to any extent in the Commonwealth.

While the machinery was being purchased, tenders were called for the building, the erection of which was immediately proceeded with. The handsome and substantial brick structure built on clean lines embraces no fewer than thirteen departments of activity, exclusive of the offices, namely, the dye-house, wool store, mixing and blending room, carding room, spinning room, warping room, winding room, weaving room, mending and darning department, milling and scouring room, drying room, finishing room and warehouse.

Meantime applications for shares were coming in literally from all parts of the globe. The list of shareholders includes every corner of the State of Victoria, the city of Melbourne, and every suburb of the metropolis being represented, as well as Ballarat, Bendigo, Geelong, Mildura and country towns and townships of all sizes and locations. Sydney and all parts of New South Wales; Queensland, as far north as Longreach, Tasmania, South Australia and Western Australia, all figured on the books as practical supporters of the enterprise. The 1,600 shareholders in fact are distributed over the whole of Australia; but they go further afield than that, to Papua, New Guinea, the Gold Coast of Africa, Sierre Leone, San Francisco, Canada, China, Belgium, Britain and even Germany. On the books there is a shareholder whose address is in Picadilly Circus, London, another Digger is domiciled in Charleroi, France,



The Returned Sailors' and Soldiers' Woollen and Worsted Co-operative Manufacturing Co., Ltd., Geelong.

The new worsted combing and spinning section of the mill has been built at the extreme left side in the photograph and is in keeping with the main weaving mill shown here. A fine bronze statue of "The Digger" is shown in centre foreground of the offices of the mill.

imperishably associated with the retreat from Mons, where still another turned his steps towards Bremen. And so to-day on the banks of the Barwon stands the mill, alive with activity and the outward and visible sign of an enterprise that is young in years but impressive in growth—*and that will grow greater yet.* Its products are many but the standard which was set and which has been attained is one, and that is to produce the best goods of their kind in Australia. For suit lengths and costumes, cloths of the effective designs of the softest texture and of the most skilful weave come from the looms; travelling rugs of forty different designs, but all bearing the hallmark of excellence, are manufactured; and hundreds of them have been chosen as presentation gifts by public and other bodies. It is contemplated to add to the range of designs the eminently Scottish tartan. Flannel and blazer cloths are amongst the other lines produced. The trade mark for these high grade goods is the word " Retsol," which is an abbreviation of the two words "returned soldier." The design for the rug label is typical of the constitution of the company. There is a Diggers' badge (the familiar rising sun) having in the centre a sheep and at the corner sprigs of wattle, emblematical of Australia— the creation of Mr. E. J. Fairnie. These are worked out in gold in a black background with blue lettering. The rug which was presented by the Diggers to the Prime Minister, the Hon'ble S. M. Bruce, on Wednesday, the 29th August 1923, was the finest of its kind ever manufactured in the Commonwealth. The design was in accordance with Mr. Bruce's well-known characteristic of being well dressed without looking " showy." It was a case of quality rather than quantity and a simple but effective design was worked out in evenly blended colours of quiet tones. Recently the Secretary wrote the Prime Minister forwarding a range of samples of woollens and worsteds, products of the mill, and invited his opinion thereon. The Prime Minister replied that he had submitted these samples to an expert whose report was as follows:—" I have examined the samples of tweeds from the Geelong R. S. & S. Woollen and Worsted Co-operative Manufacturing Company, Limited, and have pleasure in stating that they are most creditable productions. The *prices compare very favourably with goods imported, after adding duty and charges."*

The quality of the goods manufactured at the Diggers' Mill speaks volumes for the enviornment in which they are produced. The approaches to the mill are attractive, a green lawn stretching all round the building where a relic of the war in the shape of a field gun adds an appropriate touch. No fence cramps the outlook or stifles the imagination. Internally as well as externally the conditions are ideal. The general lay-out of the mill and the lighting of the various departments is near to perfection, the air is clean and free from dust and the comfort of the workers is studied in many ways, including the provision of an up-to-date hot water service. The employees are of a very superior type. The success which has been achieved has been the result of energy and modern methods, and close co-operation by everyone concerned, from the directors to the humblest employee.

It is safe to say that the products of the R. S. & S. Mills are not excelled, if indeed they are equalled, by any other mills in Australia. Those who imagine that the Commonwealth cannot produce cloth equal to the English variety, should first of all ask to be shown the product of these enterprising Diggers, before buying other material.

At the moment of writing the annual report of the directors is to hand for the year ending 31st August 1944, revealing a dividend of 9 per cent. on shares from a total profit of £13,328 for the year after providing for undisclosed taxation.

The directors report that during the past few months service contracts have slackened off but total production of the mills is still on controlled cloths; it is also announced that the first section of the worsted spinning and combing plant is now in operation— this plant is housed in a large brick structure alongside the mill shown in the accompanying photograph. Excavations are now in hand for further extensions of the mill in the near future.

Recently a new social service section was added to the mill to provide hot dinners, and amenities for the employees; there is also an employees' provident fund for which £5,000 was set aside from this year's profit by the firm.

Is Increased Textile Production Possible?

Control Board Chairman Analyses Present Situation and Examines Future Possibilities

THE following is the full text of the speech delivered by Mr. Krishnaraj M. D. Thackersey, Chairman, Textile Control Board, at a meeting of the Board held in Bombay on Tuesday the 10th April, 1945.

"Since we last met, various statements have appeared in the Press all over the country on the position of cloth and yarn supplies and on the ability or otherwise of Indian mills to produce sufficient cloth to meet the present-day needs of the country. I do not wish to get away from the fact that the situation in respect of cloth supply has gradually, and in some cases rapidly, worsened during the last few months, but the fact which has most pained me is that the industry is being condemned in the Press and all over India for the conditions for which it certainly is not to be blamed. While understanding the feeling of disappointment and anger of everybody unable to secure normal requirements of cloth, I do feel that the correct situation has not been placed before the public and is not appreciated. I would like to take this opportunity to explain the position as I see it.

"Cloth in India is produced on both power-looms and handlooms and the entire production of cloth in India is dependent on the production of mill-made yarn. The weight of yarn actually produced during the last six years 1939-40 to 1944-45 has amounted to 1,234, 1,349, 1,577, 1,534, 1,680 and 1,620 million lbs. respectively. The loss in production in 1944-45 over the 1943-44 figure is principally due to reduction in output following stoppages of mills for lack of coal or inferior coal.

Mill and Handloom Production

"The position as regards cloth supplies during the last two pre-war years was that Indian mills produced on an average 4,000 million yards of cloth, handlooms produced 2,000 million yards (much of it from imported yarn including art silk yarn), and imports of cloth, mostly of fine counts, amounted on an average to 600 million yards. There was a total available supply of 6,600 million yards, of which 200 million yards were exported out of India. Since the outbreak of war, however, the industry has gradually increased its production, despite very serious handicaps of various kinds, to over 4,800 million yards of cloth in order to meet the growing demand.

"It will be realized that during all these years no new productive machinery could be obtained and no addition could be made to plant either for fine cloth, coarse cloth or yarn. This is the position even to-day.

Exports and Defence Requirements

"Based on the figures of surplus yarn available for extra factory consumption, it is estimated that the quantity of cloth produced on small power-looms and handlooms in the country amounts to approximately 1,500 million yards only. The total cloth production in India is, therefore, approximately 6,300 million yards per annum. If all this cloth were available for distribution in the country to the civilian population, there should be sufficient cloth to enable a distribution of 15.75 yards *per capita* per annum. Unfortunately a very large slice of this production does not reach the civilian consumer, for out of the total, approximately 750 million yards of cloth per annum—at one time this reached a figure of 1,000 million yards—are supplied to the Defence Services. Over and above this a further quantity of 23 million lbs. of yarn is being taken away by Government, which is equivalent to about 100 million yards of cloth. In addition, not less than 600 million yards of cloth per annum are liable to be exported out of the country at the express wish of the Allied Governments to foreign countries. It is difficult to say whether additional cloth is still smuggled out of the country.

"Time and again the industry has pressed Government for a substantial reduction in the quantity of cloth exported from this country, but for diplomatic

reasons Government have been unable to accept this suggestion. While I realize that exports to a number of countries on the list are necessary and justified, I am strongly of the opinion that in view of the treatment meted out to Indians in South Africa all exports to that country should be stopped and in addition I do deprecate the despatch of cloth to Persia and Arabia as it is clear that when this cloth gets there it is black-marketed to an extent that has never been dreamt of, and it is a fact that cloth costing 12 annas in India after export to these countries is being sold at a price in the neighbourhood of Rs. 5 per yard.

"It will be clear from the above figures that the total cloth available for the civilian population of India is in the neighbourhood of 4,800 million yards or approximately 12 yards per head per annum for India's population of 400 millions.

"Per-capita" Consumption

"The pre-war consumption of cotton cloth in India varied from 15 to 16 yards per head. To-day there are only 12 yards per head, whereas the demand is probably in the nature of 25 yards per head due to a very welcome increase in the purchasing power and the general relative prosperity of large classes of population of India. There is money to spend and in many cases cloth is the only article which could be bought. The agriculturist wishes to make up for the years in which he had insufficient money with which to buy normal cloth requirements. Unfortunately the shortage of cloth has fallen and is falling heaviest on the poorer classes due to the wealthy and middle class persons of all communities purchasing far larger quantities of cloth than they have ever purchased before and using very large quantities of cloth for luxury as opposed to essential purposes. The position is made more difficult by large classes of consumers who previously used coarse to medium cloth now desiring only superfine cloth which cannot be made available, since it only amounts to 5 per cent. of the total cloth production and cannot be produced without specialized machinery.

Room for Rationalization of Production

"It is often pointed out that mills are manufacturing too many varieties of cloth, perhaps as a result of a Tariff Board recommendation that Indian mills must diversify production if they wished to exist in normal times. The position is not as bad as would appear from the list of cloth ceiling prices. There are not so many different sorts being manufactured at one time as would appear to be the case. There is, however, room to rationalize and to materially reduce the number of counts of yarn and number of qualities of cloth each mill shall manufacture. India is a continent with many different communities living under differing climatic conditions, and the 400 million people cannot and will not wear one standard type of clothing. There is a suggestion that the whole country should be asked to buy only unbleached, undyed grey cloth. But in the opinion of the Industry, such a degree of austerity would not materially increase the total cloth and is both unnecessary and very undesirable. The necessary amount of cloth which is required bleached or dyed or printed should continue to be supplied by the mills in that form, for these communities have clothed themselves in this type of cloth for centuries past.

Standard Cloth

"In 1943, Government asked the industry to produce Standard Cloth, to increase the production of cloth and to control and reduce prices. The industry has done even more than was expected of it in these matters which lie within the power of the industry itself. They have supplied more Standard Cloth than some of the Provinces have been able to dispose of despite the very low prices charged by the mills. They have progressively reduced the mill prices and have increased production.

Failure of Distribution Machinery

"The position, difficult as it is on account of shortage of cloth, has been made most unbearable by the serious failure of distribution. The millowners are primarily manufacturers and even before the war, except in a few isolated instances, they were not directly concerned with the ultimate distribution of cloth in retail. This matter of distribution is outside the control of the industry. A person who has to buy cloth in the black market or does not get cloth at all neither knows nor cares to know who is responsible for the failure of distribution. He generally lays the blame at the doors of millowners. The position would not have become so difficult as it is to-day had some of the Provincial and State Governments realized the importance of cloth and the need for controlled distribution. A number of persons have stated very glibly that Government should arrange to take delivery of all cloth from mills and deliver it to retailers on an all-India basis. Such a step is, in my humble opinion, quite impracticable for, the finance, staff and office accommodation involved are beyond the power of the Government to provide. The Distribution Committee, having considered this subject, has recommended that the Central Government should take up immediately the question of organizing in Provinces and States in consultation with these Governments a satisfactory and effective system of distribution of cloth.

Is Increased Production Possible ?

" As regards the future, the industry realizes to the full the need for more cloth and the crucial question is how to make it. The machinery in the country could produce 6,000 million yards of cloth and perhaps some more yarn under certain conditions. **These conditions, however, include three-shift working of spinning mills throughout India, and such working could only be practicable if Government were to make available adequate and regular supplies of coal and to assist in obtaining additional labour. Labour could only be obtained if housing accommodation and food were provided in the mill centres. Government have been unable to provide sufficient coal even for full working of mills on their present working hours, and have consistently declined to provide building materials to house labour.** The industry has been and is quite helpless. If Government consider cloth to be next in importance to food, they must give a very high priority to coal and to everything necessary to assist mills to run more shifts. Without Government's earnest and active assistance and labour's wholehearted co-operation, it is quite impossible to raise production materially and the position may deteriorate further.

" In the past three months it is estimated that probably 100 million yards of cloth production has been lost through lack of coal and inferior coal. Shortage of fuel has been and is still a constant anxiety. Even in Bombay the power problem is now one of coal and the industry is refused the additional electrical energy which it requires and has asked for.

Supply Department Can Help

" The Industry's Committee has time and again appealed to the Supply Department to replace cotton goods wherever possible with other fibres and to reasonably revise certain specifications, and if this had been done the quantity of cloth available for civilian consumption could be increased by some millions of yards.

Recommendations of Rationalization Sub-Committee

" The industry is fully seized of the grave position and wishes again to assure the country that no effort is being spared to increase production of yarn and cloth and nothing will be permitted to hamper whatever steps it is within the power of the industry to take. The Rationalization and Standardization Sub-Committee has given serious thought to this problem and has, in conjunction with Government, formulated certain proposals which have been agreed to in principle. These proposals, among other things, include:—

(a) **Drastic reduction in number of varieties of cloth and counts of yarn produced by mills ;**
(b) **utilization of maximum available productive capacity for manufacturing " Utility Cloth ";**
(c) **drastic reduction in production of such qualities of cloth as are wasteful of yarn ; and**
(d) **a substantial increase in supplies of dhotis and saris.**

" The Sub-Committee feel that by means of these rationalization measures, the production of Indian mills will be increased by 400 million yards of cloth per annum.

" Before I conclude, I wish to offer, on your and my own behalf, our gratitude to the Hon'ble Sir Akbar Hydari for the successful termination of his mission to the United Kingdom with a view to securing substantial reductions in the Defence Services demands coupled with assistance for the Indian industry to produce more cloth for the civilian consumer."

Sir Akbar Hydari's Appeal

Sir Akbar Hydari, who was present at the meeting, appealed to the Textile Control Board and the public not to get panicky. Sir Akbar Hydari said that some people were shouting that there was a cloth famine and that people were going about naked in the streets. There was a variety of reasons which combined and gave the people the idea of scarcity. It was an idea which had been largely created by the consumer besieging shops and wanting to buy stuffs which he really did not need at the time. To these people he would point out the example of the United Kingdom where people had put themselves to great sacrifice in the matter of cloth.

Paying a tribute to labour in the country, Sir Akbar said they should be grateful to the working classes for the manner in which they had assisted production in its various aspects. India had been saved during the most difficult times from the sort of trouble to which other countries of the Allied nations had been subjected to. He greatly appreciated the offer of co-operation made by labour through Mr. S. S. Mirajkar, and felt sure that the industry would also appreciate the co-operation that was offered.

Referring to the Textile Control Board, Sir Akbar said that the Board, like Cæsar's wife, should be above suspicion. He felt that if a member of the Board or of any of its committees was convicted of certain anti-social offences, he should no longer be a member of the Board or the committee. He hoped that such members would realize the position themselves and act accordingly. He added: "We must, in this country, develop a social conscience. If a man offends against the community, then the community must ostracize him. That is the attitude which people in countries like the United Kingdom and Sweden adopt and so help to keep down black marketing."

Mr. Krishnaraj M. D. Thackersey Addresses Press Conference

The steps taken by Sir Akbar Hydari, Secretary to the Government of India, Department of Industries and Civil Supplies, to enable the mill industry to increase its production by arranging for the supply of millstores were revealed by Mr. Krishnaraj M. D. Thackersey, Chairman of the Textile Control Board, at a Press Conference in Bombay. According to the present arrangement, Mr. Krishnaraj said, in addition to the 4,800 million yards of cloth, 600 million more yards would be available for civilian consumption next year, 200 million yards being the reduction in the offtake by the Supply Department, 200 million yards, being reduction in export, and 200 million yards being the increase in production owing to the possibility of securing mill-stores in accordance with the arrangement made by Sir Akbar Hydari. Sir Vithal Chandavarkar, Sir Shri Ram, Mr. Sakarlal Balabhai and Mr. T. V. Baddley were also present.

Explaining that the present acute shortage of cloth was due to the time lag of nearly two months between the sealing of the cloth and the time it began to move, Mr. Krishnaraj said that during this period all the provinces were starving for cloth.

Another reason for the acute shortage, Sir Shri Ram said, was that an official statement that the quality of cloth might have to be reduced created a panic among a section of the people who made large purchases with the result that cloth in retail depots disappeared. People wanted more fine cloth, and the finer the cloth or yarn, the less the production.

Referring to "Utility Cloth," Mr. Krishnaraj said that the term included *dhotis*, *saris*, longcloth, coatings and shirtings. He denied that the millowners had at any time refused to manufacture *dhotis*, because the margin of profits was small.

Coarser Cloth

The millowners were now ready to meet the situation but the only thing was that the people must be content with a little coarser cloth, and perhaps cloth which would not be as well woven as in the past. If the industry got sufficient quantity of reasonably good coal, and the working of the mills was not stopped for various reasons, and if there was increased labour, the industry could produce more cloth. Sir Akbar Hydari had tried his best to increase the supply of coal, and hoped in the future also, he would be successful in his attempts to help the industry in this connection.

Regarding the proposed introduction of rationalization and standardization in the industry, Sir Shri Ram said, this would mean the cutting down of quality. In this connection, the millowners had asked for an assurance from Government that they would not allow the import of cloth into India of a quality or texture finer than that produced in this country, and the industry had been given a qualified assurance.

Mr. Krishnaraj referred to the resolution passed by the Industry's Committee of the Textile Board urging every millowner to increase the production of cloth and yarn to the utmost capacity and by all possible means such as working longer hours, changing on as few occasions as possible the spinning preparations, and reorganizing the spinning sections.

According to the millowners, the allowance granted to them in regard to depreciation is totally inadequate and this allowance should be revised.

" It is obvious," said Mr. Krishnaraj in the course of a statement issued earlier, "that we should take very urgent measures to increase the overall supply of cloth and of yarn. The industry has on more than one occasion brought very forcibly to the notice of the Government of India that the allowance granted to it under depreciation is grossly inadequate and that as an incentive to further production a more reasonable system of depreciation should be adopted by the Government. The Government of India's attitude in this matter has been unfortunately very discouraging."

RESULTS OF HYDARI MISSION

More Supplies in 1946

" Production programmes for the current year," according to a *communique* explaining the achievements of the Hydari Supply Mission which recently returned after an eight-week stay in the United Kingdom, " towards defence service requirements are already in operation; moreover, while both the European and the Japanese wars have to be carried on simultaneously, it is not possible to effect a substantial reduction in current programmes of defence requirements or to procure these requirements from the U.K. But it was also realized that unless something was done, the close of the war in Europe, some time in 1945, would not relieve Indian civil economy, because India would continue to be in 1946 the base of operations against Japan to an even greater degree than in 1945. The mission was, therefore, directed to concentrate particularly on obtaining as large a measure of relief as possible for 1946.

" For 1946, of the several heads under which relief was sought, the more important were steel, leather, timber, woollens, cement and cotton textiles. The net result of the relief obtained under all these heads in 1945 is about Rs. 4,00,00,000 and in 1946 about Rs. 70,00,00,000; and of these the most important single item under which relief has been obtained is cotton textiles. In 1945, India is liable to supply up to 800,000,000 yards of cotton textiles towards the requirements of the defence services and to export 600,000,000 yards making a total deduction from what is available out of the mill-made cloth to the Indian consumer of 1,400,000,000 yards.

" As a result of the mission's discussions in London, the following agreement with His Majesty's Government was arrived at:

" (1) The mission put forward a strong request that India be enabled, mainly by reduction of her commitments to supply cotton textiles for military use and for export, to increase the supply available to the Indian public in 1945 by 600,000,000 to 800,000,000 yards. His Majesty's Government view the request sympathetically and they will endeavour by all means in their power to make this relief possible.

" (2) It is hoped that at least 200,000,000 yards of the increased supplies for the Indian consumer will be provided from increased production in India, which the Government of India will use its best endeavours to secure, while His Majesty's Government for their part will likewise make every effort to supply the mill stores and other requirements for such increased production.

" (3) As to the remainder, for purposes of present planning, the Government of India will accordingly proceed on the basis of military orders of 600,000,000 yards and exports of 400,000,000 yards in 1946.

" (4) Provision has been made for a periodic review of the position by the two Governments.

Friendly Negotiations

" The negotiations in London were carried out in an atmosphere of friendliness and mutual understanding. His Majesty's Government admitted the validity of India's claim for relief, while the mission on their side had to recognize the additional burden of making up the resultant deficit in the supplies to the armed forces and those of the United Nations who depend upon the U.K. and India for supplies of cotton textiles.

" With the actual labour shortage which will continue in the U.K. even after the end of the German war, thus preventing any rapid expansion of her production, and with the cloth ration to the U.K. consumer recently still further cut, there were obviously limits beyond which the mission could not go. The net result, however, is that the civil consumer in India will receive a substantial addition in 1946 to supplies of all kinds. If certain not unreasonable hopes are fulfilled, he will obtain, especially in cotton textiles, an additional measure of relief even above the 600,000,000 yards now secured."

Mission's Proposals

" The Hydari mission sought relief under the following heads:—(1) Reduction in the demands of the defence services on Indian production, thus making the production so released available for the civil consumer in India; (2) imports of such consumer goods as are at present either not produced at all in India or are produced in insufficient quantities; (3) procurement of raw materials and working stores required for the manufacture of consumer goods in India; and (4) expediting the procurement and despatch of equipment and stores ordered by the several departments of the Government of India in aid of the war effort or the maintenance of civil economy.

" Considerable headway has been made in regard to the last mentioned item, namely, the procurement and despatch of stores, equipment and machinery already ordered or about to be ordered, such as coal mining machinery, transportation stores, road rollers, cranes, telephone equipment, agricultural machinery, fertilizers, etc.

" As regards the requirements of finished consumer goods and raw materials, and working stores required for the manufacture of consumer goods in India, the results obtained are satisfactory. Increases under these heads from all sources over the 1944 figures should reach about Rs. 26,00,00,000 in 1945, rising to Rs. 48,00,00,000 in 1946.

" About half of the amounts mentioned represent the cost of raw materials and working stores required for the manufacture in India of consumer goods, namely, mill stores, dye stuffs, knitting wool, woollen yarn, tin plate, umbrella and bicycle components, industrial chemicals, etc. The finished consumer goods include such items as baby foods, vegetable seeds, bicycles, drugs and medicines, paper and stationery items, cotton sewing thread, sewing machines, toilet requisites of all kinds, hardware, glassware, electric household goods, etc.

" The reliefs under these heads are important, but of even greater importance were the reliefs sought for and obtained under the first head, namely, a reduction in the demands of the defence services, making available the capacity and the material so released for the civil population. Since September, 1939, India has progressively given more and more from her civil economy to meet defence requirements. In addition, during 1941-44, imports have shrunk, and there has been a shortage of consumer goods. The increase in the purchasing power of the people and in the population, and the paucity of civil supplies, have aggravated hardships which has been progressive in intensity. The brunt of hardships has fallen on the poorer elements of the population. The Government of India mission on supplies was sent to the U.K. with the object of effecting an improvement of the position during 1945 and a substantial improvement in 1946."

Central Assembly Question on Mission's Results

The Commerce Member, Sir Azizul Haque, replying to Mr. Manu Subedar's question about the results of the Hydari Mission, stated that the relief which would be provided as the result of the mission's work would amount to Rs. 120 crores, of which Rs. 70 crores would be by Indian production, Rs. 25 crores would be by import of producer goods which would help Indian industries and Rs. 25 crores in the nature of import of consumer goods.

The Commerce Member informed Mr. Subedar that very little was being imported through Government channels except drugs and medicines. Most of the goods would come through ordinary trade channels but if the trade did not respond sufficiently Government might have to consider whether they should not step in.

Mr. Manu Subedar asked whether the import of consumer goods from abroad would affect industries established in India.

Sir Azizul Haque replied that Government would import only such goods as were necessary to meet the requirements of the country and they were bearing in mind the position of indigenous industries. The question of setting up special machinery did not arise.

FAIR DISTRIBUTION OF YARN

Meaning of Control

Control over distribution of yarn manufactured by the Indian mills has been tightened by the Government of India with effect from 1st April, when the new scheme of distribution of yarn came into force. The underlying object of the scheme is that of ensuring equitable distribution of yarn under the direction of the respective provincial Governments, among handloom weavers, power-loom factories and other interests who have been experiencing great difficulty in procuring supplies of yarn at controlled rates for continuing their productive activities, and incidentally that of eliminating all unnecessary and wasteful movements of yarn.

Under the scheme, the country is divided into 23 compact territorial units. Quotas of yarn of eight different count groups have been fixed for each of the units. Orders have been issued by the Textile Commissioner under the Cotton Cloth and Yarn (Control) Order, 1943, directing spinning mills and others which have been spinning yarn in excess of their own requirements, to despatch the necessary quantities of yarn to the specified destinations.

All mills have been directed by the Textile Commissioner to give deliveries to their quota-holders in the territorial jurisdictions of the respective provincial Governments to the extent that the quantities due to the quota holders are within the quota due to the area concerned. Advice of all such despatches will be sent to the respective Provincial Textile Controllers to enable the latter to control the further distribution of supplies up to the stage when they reach the consumer. To the extent that the quota of each area is not satisfied by the above, individual mills have, to make up the balance, been instructed to hold further yarn in stock at the disposal of the provincial Government concerned for 21 days after advice of manufacture during which period the provincial Government must arrange for taking delivery of the supplies from the mill.

Surplus Yarn

On the basis of deliveries of surplus yarn made by the various mills in the past, the all-India surplus yarn production, after providing for weaving establishments, needs of war contracts and export available, is 67,600 bales per month. The demand for handloom industry alone is estimated by the Fact Finding Committee of the Government of India at 65,000 bales per month.

In view of these circumstances, the Textile Commissioner has made a detailed analysis of the requirement of each of the 23 units into which the country has been divided for the purpose and fixed their respective quotas on a basis proportionate to available supplies. He has also made allocations on individual mills and issued detailed directions calculated to ensure the availability in each of the 23 areas of the quantities of yarn assessed for it in each of the eight groups. At the same time, the initiative in respect of the subsequent division of the supply between the handloom weavers, power-loom factories and other interests has been left with the controlling authorities in the respective provinces and States. Thus, the provincial and State Governments will hereafter know definitely the exact quantity of the various counts of yarn they will be getting each month from the sources intimated to them in advance, and will accordingly, be in a position to arrange the distribution of this supply to ultimate consumers.

Order on Yarn Quota Holders in Bombay Province

Under the Textile Commissioner's all-India yarn distribution scheme, which came into force on 1st April, quotas have been fixed for each zone. The Provincial Textile Controller, Bombay, has issued an order under the Cotton Cloth and Yarn (Control) Order, 1943, directing the quota holders in Bombay Province not to sell or deliver or otherwise dispose of any yarn except to such person or persons and subject to such conditions as he may from time to time specify in this behalf. This order does not apply to yarn purchased by merchants on behalf of other Provinces and State Governments, under the orders of the Textile Commissioner, Bombay, and to sewing thread or to yarn specially prepared for sewing.

Discussion in Bombay Corporation

The Bombay Municipal Corporation, on Thursday, 26th April 1945, passed a resolution drawing the Government's attention to the great hardship experienced by people in obtaining cloth, and particularly to the further hardship that would be caused as the result of the Government orders restricting supplies to only one pair of *dhotis* and one pair of *saris* once in six months to a family, and urging that suitable measures be taken so as to make an adequate supply of clothing available to the public at economic prices at an early date.

Weavers' Federation Formed in Bombay

The need to centralize all registered weavers' societies and organizations of the province in the interest of the trade was stressed by Mr. M. Y. Nurie, former Minister, Bombay Government, presiding over a meeting organized by the Bombay Weavers' Society, in Bombay, on Sunday the 22nd April 1945. The meeting was called to form a provincial federation of weavers, and was attended by the delegates of 16 districts.

Mr. Latif Jafri explained the control orders of the Government on yarn and cloth and the difficulties felt by the weavers. Mr. N. A. Abbasi welcomed the delegates on behalf of the society.

A resolution seeking Government recognition for the Federation and representation on the panel for the distribution of yarn and cloth in the Province of Bombay and on the district distribution committees was passed. The resolution urged that the distribution of yarn to the weavers be conducted through registered bodies only and that more attention be paid to transport facilities for movement of yarn and also for handloom cloth to meet the present shortage of cloth in the country.

Another resolution urged the Textile Commissioner, Government of India, to appoint at least one representative of the Federation on the All-India Handloom Board.

The conference elected Mr. M. Y. Nurie, President of the Bombay Provincial Weavers' Societies Federation, Mr. R. G. G. Deshmukh and Mr. Adam Adil, Vice-Presidents. Mr. M. E. Ansari, General Secretary, Mr. Latif Jafri, Secretary, and Mr. N. A. Abbasi and Gulam Mahomed, Organizers.

AIDING DYERS AND PRINTERS

Council of State Plea

The Council of State on the 27th March passed, without a division, Mr. Hussain Imam's resolution recommending that steps be taken to help the cottage industry of dyeing and printing (cotton cloth) and save it from unfair competition.

Mr. Hussain Imam complained that the policy of the Textile Control Board had been to help those whose shoulders were broad enough to take up additional burdens. The Government notification of 6th March, he said, had adversely affected this industry which was already starving. Under this notification neither the handloom printers could purchase any cloth from the mills nor could they sell it back to them after printing. He further complained of insufficient supply of raw material and chemicals to the industry which supported thousands of people in Ahmedabad and other places.

Sir Jogendra Singh, Education Member, stated that in a matter like this it was difficult for the Government to pay attention to each individual and, therefore, it was imperative that they should form themselves into co-operative societies. He asked the mover to take the initiative in this direction in his own province.

Mr. N. K. Dass said that in his province indigenous dyers found it extremely difficult to get either dyeing chemicals or cloth from outside and asked that the quota of 3,000 bales allotted to dyers in his province was quite insufficient.

Mr. P. N. Sapru and Mr. Mahomed Padshah supported the resolution.

Tex-marking Exemption

Mr. H. M. Patel, Secretary, Industries and Civil Supplies, explained what the Government had done to help printers and dyers against unfair competition. They were exempted from tex-marking and those who had stocks were not compelled to liquidate them at uneconomic prices. But these concessions were abused, and the Government were compelled to withdraw them.

The concessions, Mr. Patel added, were a negative form of assistance, and the Government felt it necessary to accord positive assistance in regard to chemicals and raw materials and had, during the last year, released 100 tons of caustic soda and quantities of other material.

Appealing to the mover to withdraw his resolution, Mr. Patel said that their object was to save the hand-printer from unfair competition. "We have done all we can under the circumstances to help the hand-printing industry and shall continue to do so."

Mr. Hossain Imam declined to withdraw the resolution which was passed without a division.

Mr. Hussain Imam sought to move an adjournment motion to discuss the question of "the instructions issued by the Government of India to the Bengal Government for the purchase of cloth in Calcutta for export to China." Mr. Hussain Imam withdrew his motion after hearing Sir Akbar Hydari's statement.

Sir Akbar explained that last year India was very short of raw silk for the manufacture of parachutes. The only place where India could get that silk was from China. "The Chinese were prepared to let us have this silk only if we gave them cotton textiles in return. They made considerable demands, but after negotiations it was finally agreed that they should get 97,000 yards of cotton from India against silk."

Sir Akbar added that Mr. Wu, the Chinese representative, was authorized by Mr. Jones's letter to buy all the cloth he required. In reply to a further question Sir Akbar said that Mr. Wu could not obtain even these 97,000 yards.

HAND-PRINTERS AND DYERS ORGANIZE

Federation Formed

Presiding over the first session of the All-India Hand-Printers' and Dyers' Federation at Hira Baug, Bombay, on Sunday, the 22nd April 1945, Mr. S. K. Patil observed that the recent control orders passed by the Central and Provincial Governments would, besides crippling the ancient national cottage industry of hand-printing and dyeing, take away the means of livelihood of large numbers of people.

The conference was attended by delegates from Lahore, Meerut, Karachi, Indore, Ratlam, Hyderabad, Baroda, Ahmedabad and a number of other places.

The conference passed a number of resolutions, the first of which protested against the Government notification dated 6th March last and particularly the fourth clause of the notification by which textile mills were allowed to hand-print 5 per cent. of their production. It was feared that this would make it impossible for hand-printers to obtain grey cloth. The resolution also urged raising of the ban on hand-printers selling cloth.

The Federation was formed at a meeting of owners and workers in the hand-printing and dyeing industry in India on the previous day. The objects of the Federation are to protect the cottage industry from extinction and to overcome the difficulties which have arisen from the various control measures issued by the Government.

Addressing the meeting, Mr. Chhagan Gulabchand Kamdar, Chairman, Reception Committee, suggested that a representative of the Federation be appointed on the Textile Control Board and the Industries Committee.

Relief Supplies to Bengal

Mr. K. C. Neogy recently asked the Commerce Member in the Central Assembly to state whether any special step was proposed as an emergent measure to give relief to Bengal in the matter of supplies of cotton textiles.

Sir Azizul Haque: "I have already arranged for a special despatch immediately of about 3,000 bales of cloth to Bengal, and we are grateful to the War Transport Member for specially arranging this at extremely short notice. I expect that the delivery will have been completed within the next few days. In addition, I have also decided, as a special case, and without prejudice to the ultimate decision on this matter, to allot to Bengal during April and May cloth at the rate of 12 yards per head per annum. We are also trying to isolate special needs for Red Cross, hospitals, etc. We propose to depute a senior I.C.S. officer, if available, to be in constant touch with the cloth situation in the eastern zone.

"As I have stated on several occasions, internal distribution within a province is the responsibility of the provincial Government, and the Bengal Government is now taking drastic steps to overhaul its distributive system and organization."

CLOTH CONTROL SITUATION IN BENGAL

3,000 Shops Sealed in Calcutta

What is believed to be the biggest raid for many years in Calcutta was made by the police and officers of the Civil Supplies Department on Sunday the 25th March when they simultaneously searched and sealed nearly 3,000 wholesale textile shops and godowns in the main cloth trade area of the city.

The raid was designed as the first of a series of steps which the Government of Bengal propose to take in order to wipe out the anti-social activities of hoarders, profiteers and black-marketeers in cloth and yarn.

The 14-hour "swoop" on hoarders and black marketeers has resulted in the discovery of 11,410 bales of textiles—said to be a record—from less than half of the 1,200 godowns which have been sealed.

The stocks included several thousand pairs of *dhotis* and *saris* and 119 unclaimed bales of textiles.

"Loose" stocks alone which were seized from authorized and unauthorized places amount to 37,353 pairs of *dhotis* and *saris* and 26,000 "*thans*" of shirtings and coatings. Twelve bales of cloth and yarn and 441 pairs of *dhotis* and *saris* were seized by the police from "undeclared" places. Forty-five more shops and godowns were sealed by them subsequently.

Continuing their anti-hoarding drive for the second day, the police unearthed Rs. 5,00,000 worth of cotton yarn from an underground place in a house under construction in north Calcutta.

The warning that the Bengal Government were in no mood to tolerate anti-social activities of cloth black-marketeers and that they would take steps to break the black market was given recently by Mr. H. S. Suhrawardy, Minister for Civil Supplies.

Mr. Suhrawardy said that operations similar to those launched in Calcutta on the 25th March when about 3,000 textile shops and godowns were searched and sealed, would also be undertaken in suitable areas in the mofussil.

Mr. Suhrawardy said that he proposed to distribute in the mofussil areas the stocks imported from other provinces and those produced by local mills to Calcutta as soon as possible. In the meantime he wished to set up a small committee of leading citizens in each ward to assist the Government in the equitable distribution of cloth. He emphasized that no effort would be spared to liquefy the frozen stocks as rapidly as possible in order to give quick relief to the people, to turn over stocks and to bring in more stocks from outside.

Bengal Official View About Shortage

Mr. W. S. C. Tully, Director-General of Consumer Goods, Bengal, at a Press Conference recently admitted a serious shortage of cloth in the province, in spite of the increased quota of 12 yards per head per annum.

He said that the allotment to Bengal, on the basis of ten yards per head of the 1941 population, would entitle the province to 610,000,000 yards of cloth per annum but more than 25 per cent. of this amount had to be derived from handloom cloth which was not possible yet to control. About 20 per cent. of the remaining quantity would be required for purposes such as mosquito-netting, canvas, napkins, bedsheets, etc., reducing the *per capita* annual allotment of mill-made cloth to approximately 6 yards. It was even less than this, because the present-day population of Bengal was probably nearer 63 millions. Although the allotment had been raised to 12 yards per head, it was clear, he said, that the shortage was very serious indeed.

Questions in Commons

The shortage of cloth in Bengal was referred to at question time in the House of Commons on 29th March, 1945, when Mr. Sorensen (Lab.) asked what action was being taken, what contracts for cloth had been given by the Government and whether tenders had been asked for.

Mr. Amery replied: "War conditions have led to reduction throughout India of the supply of the cotton cloth available for civil consumption. Supplies allocated to Bengal, as to other provinces, are on the basis of proportion of the previous consumption, but there are local difficulties of distribution and complaints have been made recently of a severe shortage in some parts of the province.

"Ministers of the Bengal Government are answerable for distribution within the province and detailed information is not available here as to the remedial measures they contemplate."

Mr. Sorensen: "Can Mr. Amery reply more fully to the latter part of my question whether tenders were asked for contracts for cloth?"

Mr. Amery: "That is a matter entirely for the Bengal Government and I do not know whether tenders were asked for or not."

SALE OF FOREIGN CLOTH IN BENGAL

Government Control

A ban on the sale of foreign cloth except with the written permission of the Controller has been imposed by the Governor, who has promulgated the Bengal Foreign Cotton Cloth Control Order.

The Order directs dealers in foreign cloth to submit within a week to the Controller a declaration of all such cloth in his possession or under his control and also empowers the provincial Government to fix the retail price of any foreign cloth in respect of which a declaration has been submitted.

The Order does not apply to any foreign cloth landed at a port in India on or after the 14th October 1944.

Textile Commissioner in Calcutta

Giving his general impressions of a week's stay in Bengal, Mr. M. K. Vellodi, Textile Commissioner, Government of India, said at a Press Conference that the existing state of supply of cloth or of yarn in the province could not be described as "famine." This was unwarranted by facts and was, indeed, a gross exaggeration. He, however, admitted that shortage of cloth was felt particularly in the rural areas of the province, that handloom cloth was not within the reach of the poorer sections of the country and that mill-made cloth was badly distributed.

In order to meet the shortage of *dhotis* and *saris* in Bengal, Mr. Vellodi said, he had arranged for the supply from Bombay and Ahmedabad of 3,000 bales of cloth, of which 2,000 were of *dhotis* and *saris* useful to the people of Bengal.

Replying to criticisms of the basis on which the allotment of cloth had been made to Bengal, Mr. Vellodi said that supplies of cloth were being made to the province during April and May of this year on the basis of 12 yards *per capita* and on a review of the position this might also be continued if possible.

Mr. Vellodi revealed that from 1st April, the monthly supply of yarn to Bengal would be 7,640 bales, of which 7,100 bales had been earmarked for handlooms. The Government of India had also arranged for importation of fine yarn from overseas and this, he hoped, would materially assist in alleviating the position.

Rationing in Calcutta

Details of a rationing scheme for mill-made cloth in the Calcutta area are, it is learnt, being worked out by the textile authorities.

Under the Government's scheme of distribution each individual over the age of 12, it is reported, will receive two *dhotis* or two *saris* or seven yards of cloth each year. Meanwhile, the Government have selected 16 shops in various parts of the city for the distribution of cloth for emergency purposes such as marriages, funerals and other ceremonies.

A Central Civil Supplies Advisory Committee, consisting of 30 persons representing various political parties and interests, has been formed. Its principal function will be to advise the Government in respect of the needs of the public and also inform them of the public reaction to the Government's scheme of rationing.

In Sylhet

Cloth rationing has been introduced in Sylhet. The issue of cloth is restricted for the present to a maximum of 10 yards per family in view of the present stock position. " The requirements of a family can be supplemented," says the Additional District Magistrate, in a notice, " by standard cloth which is easily available in the market."

Rate of Commission

The Government of India have by an amendment to clause 12 of the Cotton Cloth and Yarn (Control) Order, 1943, prescribed that the rate of commission which a commission agent may receive in respect of a sale of cloth or yarn shall not exceed ½ per cent. This provision applies only in cases where the cloth or yarn is sold by a dealer and does not apply in cases of sales by mills.

Maximum Prices of Cotton Waste

The Government of India have by a notification in the *Gazette of India Extraordinary* dated the 22nd March 1945 fixed the maximum prices at which any person may sell cotton waste (hard) in India or may export it to any place outside India.

The various descriptions of cotton waste and their maximum schedule prices are given below:

Hard cotton waste in pressed bales.	Maximum price ex-godown of storage or f.o.b. at any port in India (in the case of export price) per cwt.		
	Rs.	a.	p.
Reelers and winders coloured	24	8	0
Reelers and winders white (grey)	23	8	0
Sized coloured	23	8	0
Sized white (grey) ..	23	0	0
Any mixture of above types of hard waste ..	23	0	0

Note.—If the cotton waste is sold or exported otherwise than in pressed bales, the prices specified in second column shall apply subject to a reduction of Re. 1 per cwt.

[Exemption from Notification dated 16th December 1944

The Textile Commissioner to the Government of India has decided to exempt cloth manufactured by power-loom factories consisting of less than 25 power-looms from the operation of his notification dated the 16th December 1944 which requires that those dealers in Bombay City and Suburban Districts and in the Ahmedabad Municipal Borough who buy from them not to sell or dispose of their stocks except with the sanction of the Textile Commissioner.

Transport Permits for Handloom Cloth

Transport permits from Ahmedabad and Bombay are valid for the movement of power-loom and handloom cloth in addition to mill-packed bales.

Imported Fents Exempted from Price Stamping

The Textile Commissioner to the Government of India has decided to exempt imported fents not exceeding three yards in length from the price stamping provisions of his notification No. T.C.(12)/44, dated the 14th October 1944. Similar exemption is being provided for imported embroideries also which have been so certified by the respective Controllers. It is to be noted that the above varieties are being exempted only from price stamping and not from price control. Certificates of landed cost would be issued by the respective Controllers for these varieties also and importers and other dealers are instructed to specify the number and date of such certificates on all invoices issued by them in respect of these goods so that it will be easy to verify whether the prices which they charge are lawful.

Further Restrictions on Exports of Cloth

The Textile Commissioner to the Government of India has issued directions to all manufacturers in the country, including owners of power-loom factories, directing them not to sell for purposes of export cloth of counts of 48s and above. The manufacturers have also been informed that as exports of cloth of counts of 36s and 47s will be limited to such quantities as the Export Trade Controller may permit specifically in writing, manufacturers must verify such permission to be presented by exporters and export wholesale dealers before sale or delivery of such cloth.

Cloth Quota for Club Residents

The recent scheme of the Government, introducing the rationing of *dhotis* and *saris* entitling the head of each family to a pair of *dhotis* and a pair of *saris* during a period of six months, also applies to residents of clubs, hotels and lodging houses. According to the foodgrains rationing scheme, the management of a club obtains the ration cards of its members. Whenever a member of a club requires *dhotis* or *saris* he has to apply to the authorities and the application will be forwarded to the Controller of Rationing for a certificate which will entitle the club member to his quota of cloth.

No dealer in cloth may print any cloth or permit it to be printed except under the authority of the Controller, says a Government of India notification. The Provincial Textile Controller, Bombay, has pending further orders, authorized dealers to hand-print cloth or permit to be hand-printed provided they hold licences under the Bombay Handprinters' Licensing Order (1944).

UNAUTHORIZED CLOTH EXPORTS

Bombay Measures

Under arrangements made for the distribution of cloth, quotas have been fixed for each zone by the Textile Commissioner. As a consequence of these arrangements, Bombay Province now receives only a limited supply of cloth as its quota; and as it is necessary in the public interest to prevent unauthorized exports, the Government has issued an order banning the removal by road of cotton piecegoods and yarn outside the Province except under permits given by the Provincial Textile Controller or by the District Magistrates. Cloth and yarn covered by road permits granted by the Textile Commissioner are exempt from these orders.

The previous orders banning the export of piecegoods and yarn by road outside Bombay City and Bombay Suburban District, and also out of Ahmedabad City, remain unaffected by these orders, as well as the orders banning the import and export of cloth and yarn into and from the Districts of Kolaba and Ratnagiri.

The above Order has been published in the *Bombay Government Gazette* (*Extraordinary*), dated the 7th April.

Madras Dyers to be Licensed

The first anniversary of the Madras Handloom Yarn Dyers' Association was celebrated recently at Madras, Mr. S. Venkateswaran, Provincial Textile Commissioner, presiding. He said that the controls and restrictions which had been enforced for some time had succeeded in stamping out the black market for white yarn, though not for dyed yarn. They should do their best to put an end to black markets. A system of licensing dyers would be introduced though this might be a handicap to some of those who had established dyeing factories during the past two years as they would have to compete with others already well established in that line. The present inadequate supply of white yarn was due to transport difficulties. The complaint that the prices of handloom cloth were not steady and that they did not decrease with the prices of mill-made cloth arose from lack of control of prices of dyed yarn. As soon as control was introduced, the prices of handloom cloth were bound to go down.

'Bridal Sarees' Held up at Dhanushkodi

The difficulties experienced by Ceylonese Hindus in obtaining Indian silk sarees for brides were the subject of a question in Ceylon State Council recently.

One member cited a particular case in which after the party had taken the precaution of taking a permit to bring a silk saree from Madras to Colombo for a Hindu bride, the passenger bringing the saree was asked to leave the saree at Dhanushkodi by the Customs authorities on the ground that there was a total ban on the export of silk from India. The Hindus, the Member continued, would be greatly hurt if this were so, as it was their traditional custom that the bride should have a silk saree presented to her on the occasion of her marriage.

A Madras Memorandum

In the course of a memorandum released for publication, Mr. Narandas J. Dutia, President of the Madras Piecegoods Merchants' Association, alleges that transport bottlenecks and official dilatoriness had held up February cloth quotas in Bombay and Ahmedabad and continues follows:

In pursuance of the All-India Cloth Distribution Scheme, an election was conducted on the 14th March by the Provincial Textile Commissioner for the purpose of electing three representatives to be appointed as purchasing agents at three of the important centres in the Bombay surplus area to make purchases in those centres on behalf of this province. District representatives from all the 22 districts and 12 representatives from the city constituted the electorate and the Provincial Textile Commissioner nominated one representative each from each of the three panels for each centre, and these persons alone will be authorized to make purchases in the respective markets allotted to them from April onwards. There is a widespread feeling among the electorates that they have not been previously informed of the functions of the purchasing agents, the terms and conditions of service and last but not least provided with a list of voters in advance. It is remarkable that sufficient publicity was not given about the holding of this election for dealers to contest it with the result that persons who are supposed to be in the confidence of the local textile authorities managed to top the list and they have been accordingly chosen for appointment as representative dealers at the three centres.

This scheme costs about Rs. 1,50,000 a year to the trade by way of commission payable to the three representative dealers besides an annual expense of Rs. 15,000 in the shape of salary and other establishment charges payable to the agent of the Provincial Textile Commissioner at Bombay. Other provinces are fortunate enough in getting this work done for nothing through their chosen representatives of the trade.

Westerns Cottons Control Order

The Government of Madras have by an amendment to the Westerns Cotton Control Order, brought within its scope banks and other institutions with whom cotton has been pledged. They should declare their stock of cotton to the Collector of the district concerned on or before 10th April 1945. They will, however, have no responsibility for the pressing or ginning of cotton in their possession as required by the order. The growers and the dealers who have pledged cotton with the banks will also be required to declare the stocks pledged with the banks and other institutions on or before the 10th April 1945. They will also be responsible for arranging the pressing and ginning of cotton with these banks.

Mr. Mirajkar's Suggestions for Cloth Distribution

Mr. S. S. Mirajkar, member of the Textile Control Board and Vice-President of the All-India Trade Union Congress, returned to Madras on 8th April after visiting various centres in South India with a view to studying the condition of the handloom industry in the Madras Province.

Discussing the position of cloth in the country Mr. Mirajkar said that if the total production of both mill-made and handloom cloth in the country was properly distributed every person in the country could be easily ensured an adequate supply of cloth.

Under the existing arrangements, Government took away about 11 per cent. of the total production to be utilized for defence purposes, besides reserving 9 per cent. for export.

Mr. Mirajkar suggested that Government should immediately stop exporting cloth. Early arrangements should also be made for importing cloth from the United Kingdom and United States of America which could be used for defence purposes. No efforts should be spared for augmenting the country's (India's) supply of cloth.

Mr. Mirajkar regretted that the Textile Control Board had not discharged its duties to the entire satisfaction of the public. The very composition of the Board should be altered, he added. As at present constituted, the Board was nominated by the textile leaders (out of the total of 25 members, 12 are millowners, 8 wholesalers, and 5 represent consumers' interest). It was high time that it was reconstituted with a larger representation for consumers and working classes.

ACTION UNDER CLOTH CONTROL ORDER

Mill Agents Fined

Judgment was delivered on 29th March by Mr. J. Sivanandam, Additional District Magistrate, in the case in which Messrs. A. L. A. R. Kalayaraja Chettiar, A. L. A. R. Arunachalam Chettiar and P. S. Sathappa Chettiar, managing agents of the Kaleeswar Mills, representing the firm of A. L. A. R. Arunachalam Chettiar and Dewan Bahadur P. Somasundaram Chettiar, bankers and secretaries of the Kaleeswar Mills were charged under section 12 (1) of the Cotton Cloth and Yarn Control Order of 1943 read with Rule 81 (4) of the Defence of India Rules, with having sold cloth produced by the Kaleeswar Mills to Mr. S. Ramaswami Mudaliar and Mr. Haji Abdul Majid in February last after collecting the premium over and above the contract price. Accused 1 and 2 were convicted and sentenced each to pay a fine of Rs. 15,500 under two counts in default to six months R.I. The third accused was sentenced to pay a fine of Rs. 30,500 under two counts in default to six months R.I.

Bombay Workers' Plea To Government

A resolution urging the Government to take immediate steps to increase the production of cloth and to release a larger quantity of cloth to meet the needs of the civilian population was passed at a meeting of workers held at Kamgar Maidan, Bombay. The meeting, which was convened under the auspices of the Bombay Provincial Trade Union Congress, the Bombay Girni Kamgar Union, the Bombay Committee of the Communist Party and other organizations, requested the authorities to introduce a system of cloth rationing, to take effective steps against black-marketing and profiteering, and to take measures to reduce the price of cloth. Mr. Dinkar Desai presided.

The meeting suggested that the production of cloth could be increased by compelling mills to produce only a few varieties and adopting all possible measures of rationalization, including efficiency schemes, as recommended by the Divatia Textile Labour Inquiry Committee.

Textile Quota Holders

Following a circular issued by the Textile Commissioner, 76 textile quota holders in Bombay who are not members of the Mulji Jetha Market associations, met at the Silk Merchants' Association Hall and unanimously elected Mr. Amritlal K. Kanji, of Messrs. Kalidas Kanji, to represent their interests on the Bombay Cloth Distribution Panel. The quota holders also formed an association known as the Bombay Cloth and Yarn Quota Holders' Association and elected seven members to the Working Committee.

Artificial Silk Yarn

After consulting the main interests concerned, the Controller of Civil Supplies has decided that all artificial silk yarn imported will be distributed in certain fixed proportions to the consumers of the yarn, namely, the art silk mill industry, the handloom industry, the cotton textile industry, and the manufacturers of miscellaneous articles such as embroidery and gas mantles, says a press note.

Danger of World Textile Shortage

OFFICIALS in Washington consider that the possibility of an Allied clothing and textile shortage is almost as serious as the current food crisis. Textiles are likely to rank high in the forthcoming discussions with the British Ministers. The problems of food and textiles are closely related, for example, when rice-producing countries are liberated, the Allies will need much textiles which are a very important inducement to native farmers to sell rice.

A similar situation already prevails in India, West Africa, etc. If textiles are not available, the rice-eating populations of China and the Philippines may have to go correspondingly hungry. A serious Allied textile situation has developed similarly to food shortage including military requirements and increasing demands for liberated people. The American War Production Board and the Army and the Navy recently discussed the question of balancing the rising military needs with minimum civilian requirements. Accordingly, the Army agreed to release some loom space for working clothes. It is believed also that the Army's demands will be considerably reduced after Germany's defeat. Americans so far are rationed only for shoes.

Wire Healds for Textile Industry

MESSRS. Jones Textilaties Ltd., a well-known leading British firm of heald and reed makers of Blackburn, England, advocate the use of deeper wire healds. They state that the free movement of healds has always been the most essential point, particularly when using wire healds. This can be secured by the use of deeper wire healds with oval-shaped end loops, in place of round end loops so largely in use in Indian mills. In practice it has been found, they say, that it is not possible to obtain free movement by using old-fashioned 9½″ round end looped healds, which give limited shedding space and do not afford scope for the easy and free movement of the shuttle. Short rigid healds are said to cause many weaving faults, but deeper healds, it is believed, are kinder to the yarn, and give more flexibility to the movement of the warp yarns, resulting in better weaving, less breakages, manufacture of better quality cloth and consequently increased production.

Experience under modern conditions, we are informed, has shown that it pays to use 10¼″, or even better 11¼″, wire healds against the rigid type of 9½″ wire healds which have become antiquated and which are no longer being freely made by the makers for their British, American and Continental markets.

Indian mills may therefore find it advantageous to follow the latest methods and adopt the use of deeper wire healds, preferably of the standard 10¼″ long oval-shaped end wire healds, or, better still, 11¼″ depth.

Those interested in the subject may write for further information to their agents, **Messrs. The Sizing Materials Co., Ltd., 137, Esplanade Road, Fort, Bombay,** or to any of their branches at Ahmedabad, Cawnpore or Coimbatore, or to Messrs. Jones Textilaties, Ltd., Calcutta Agents: Messrs. McGavin & Co., 30, Strand Road, Calcutta.

Statement Showing the Kinds of Fabrics Woven, Wages Paid, etc., in Representative Centres of Handloom Weaving in South India

Names of Districts	Centres	Kinds of Fabrics woven	Counts of yarn	Quantity woven	Average daily earnings
					Rs. a. p.
Tanjore.. ..	Tugili	Angavastrams	100s	56×45	0 9 0
	Ramabalapuram	Coloured *saris*	20s	99×27	0 3 6
Trichinopoly ..	Turaiyur	Grey cloths	80s	3×50	0 10 0
	Elavanur	Bed sheets	30s	Two	0 10 0
Madura ..	Dindigul	Turbans with lace	100 & 150s	50×90	0 10 0
	Jakkampathi	Coloured *saris*	20 & 30s	90×45	0 6 6
Tinnevelly ..	Viravanallur	Silk and cotton weaving	Silk	9×45	0 9 0
	Papanasam	Coloured *saris*	40s	130×45	0 5 6
Ramnad ..	Paramakudi	Silk *saris*	Silk	9×45	0 12 9
	Emaneswaram	Coloured *saris*	40s	90×42	0 10 0

OUR PERSONAL COLUMN

H. E. the Rt. Hon'ble Sir John Colville, Governor of Bombay, and Senior Privy Councillor among the Presidency Governors, has been sworn in as Acting Viceroy and Governor-General of India, to officiate for H. E. Field Marshal Lord Wavell, Viceroy of India, who has proceeded to London for consultations with His Majesty's Government. Sir Henry Knight, Adviser to the Governor of Bombay, will act as Governor of Bombay during the absence of Sir John Colville.

Mr. N. R. Pillai, C.I.E., C.B.E., I.C.S., has, on return from deputation from the U.K., assumed charge of the post of Secretary in the Department of Commerce, Government of India.

Mr. K. Padmanabhan, Assistant Textile Commissioner, Madras, has been appointed Provincial Textile Commissioner, Central Provinces and Berar.

Mr. G. B. Constantine, Labour Commissioner, Bombay, has been appointed Additional Judge of the Chief Court of Sind, for three months from 2nd April.

Mr. S. V. Joshi, Assistant Labour Commissioner, will act in the place of Mr. Constantine.

Mr. N. L. Gadkari has been appointed Junior Inspector of Factories, Bombay, for the Town and Island of Bombay and the districts of Bombay Suburban, Thana, East Khandesh, West Khandesh (excluding Nawapur Taluka), Nasik, Kolaba and Ratnagiri, and Mr. R. P. Patel is to be Junior Inspector of Factories, Ahmedabad, for the districts in the whole of Gujrat and the Nawapur Taluka of the West Khandesh District.

Mr. Cassamally Munjee has been elected President of the All-India Muslim Chamber of Commerce and Industry, Bombay, for the current year. Mr. Mahomed Taher and Khan Bahadur Mohammedally Allabux have been elected Vice-Presidents.

The Standing Committee of Economists to advise the Member for Planning and Development, New Delhi, to be known as the General Purposes Committee, will consist of Sir Theodore Gregory, Mr. C. N. Vakil, Dr. P. S. Lokanathan, Dr. Gyan Chand, Mr. M. K. Ghosh, Mr. D. R. Gadgil and Dr. V. K. R. V. Rao.

Mr. H. M. Mathews, C.I.E., has been appointed Chairman and Mr. W. L. Voorduin, Member, of the Technical Power Board of the Government of India.

Mr. Sing Van Ming, a Chinese expert on silk, is coming out to India, to advise the Government of India on the rearing of silk-worms. Government's proposals, *inter alia*, are to step up the production of silk in this country. Mr. Ming is expected to stay here for six months.

The marriage of **Dr. Shriniwas D. Joshi,** M.B.B.S. (son of Mr. D. P. Joshi of the Morarji Goculdas Mills, Bombay) with Miss Shanta V. Shiralkar took place at Poona on 4th March 1945.

Mr. Bhogilal H. Patel, proprietor of the well-known firm of Das & Co., of Bombay, gave a tea party at the Taj Mahal Hotel, Bombay, on the afternoon of Wednesday, 11th April to bid *bon voyage* to their Technical and Sales Manager, Mr. Sashittal Nagesh Rao, who is shortly proceeding to Great Britain and the United States of America. Besides Seth Mohanlal L. Shah, an agent of the Mohini Mills, Calcutta, who presided on the occasion, several prominent mill store merchants and other citizens were present at the function. Several speeches were made appreciating the enterprise and foresight shown by Seth Bhogilal, the proprietor of Das & Co., in sending Mr. Rao to foreign countries so that he might study the conditions there and help them in their post-war development work. Several speakers also spoke about Mr. Rao and his work and the latter in a short speech very feelingly thanked those present for their kind words and good wishes.

Institution of Engineers (India), Bombay: New Committee Members.—The following have been elected as Members of the Committee of the above association for the year 1944-45:—Messrs. P. P. Adaeja, P. E. Golvala, R. K. Nariman, J. D. Daruvala, M. F. Mehta, N. V. Modak, E. A. Nadirshah, B. U. Vagh, S. B. Joshi, S. M. Kini and H. F. Bamji.

View of the Gathering

Farewell Address to Mr. A. D. Walwyn.—The Osmanshahi Mills Staff Club got up a delightful "At Home" in honour of Mr. A. D. Walwyn, Deputy Managing Agent of the mills, at Nanded on 12th March 1945 on the eve of his departure to England, after six years' association with them, on 'Home' leave. An address wishing Mr. A. D. Walwyn good health and *bon voyage* and a pair of Bokhara carpets were presented to him by Mr. E. J. Tarapore, Manager of the Mills, on behalf of the staff. Mr. Walwyn replied suitably.

Indian Chamber of Commerce, Lahore: New Committee Members.—The following members will constitute the Committee of the Indian Chamber of Commerce, Lahore, for the year 1945-46: *President:* R. B. Ram Rattan Seth; *Vice-Presidents:* L. Shiv Raj Bhalla and S. B. Sardar Sapuran Singh Chawla. *Members:* Sirdar P. S. Sodhbans, Mr. H. S. Balhaya, K. B. Sirdar Habib Ullah, R. B. L. Janki Dass, R. B. Lala Sohan Lal, Mr. K. R. Khosla, Seth Kishen Chand, L. Yodh Raj, and Mr. G. S. Salariya. *Ex-officio Member:* K. B. Syed Sir Maratib Ali Shah.

Indian Chamber of Commerce, Calcutta: Committee Members for 1945.—The following office-bearers of the Indian Chamber of Commerce have been elected for the year 1945:—President: Sir Abdul Halim Ghuznavi, M.L.A. (Central); Senior Vice-President: Mr. K. D. Jalan; Vice-President: Mr. Darab Cursetji Driver; Ordinary Members of the Committee: Messrs. B. M. Birla, M. L. Shah, D. P. Khaitan, G. L. Mehta, R. L. Nopany, Nand Lal Puri, K. L. Jatia, Lala Karam Chand Thapar, K. P.Goenka, K. M. Naik, M. G. Bhagat, H. Ghosh, M. R. Jaipuria, M.L.C., P. D. Himatsingka, Sir Padamji Ginwala, Mr. K. C. Neogy, M.L.A. (Central), Mr. R. N. Bangur and Khan Bahadur G. A. Dossani.

Mr. George G. Hopkinson, a director of Hopkinson & Shore, Ltd., Mirfield, England, dyers and finishers, has accepted an invitation to become President of Bradford Textile Society for 1945-46.

Mr. Hopkinson is Chairman of the Dyers' and Finishers' Association and represents that body on the Council of the Bradford Chamber of Commerce.

Mr. Gilbert Varley, M.Sc., Works Director of Platt Bros. & Co., Ltd., Oldham, has been elected a member of the Council of the Institution of Mechanical Engineers.

Mr. Fuller E. Callaway, President of Callaway Mills, LaGrange, Ga., U.S.A., was elected Chairman of the Board of the Cotton Textile Institute, Inc., succeeding Mr. Herman Cone of Proximity Manufacturing Co., Greensboro. Dr. C.

Several mills and factories who are keen on post-war development are desirous of being put in touch with textile men who can give proper guidance and general advice on mill affairs as consultants and technical experts. Those interested may kindly write to us: The Editor, *I.T.J.*

T. Murchison was re-elected President of the Institute. Vice-Presidents are Mr. C. F. Broughton of Wamsutta Mills (re-elected) and Mr. Harrison Hightower, elected to succeed Mr. Hugh M. Comer of Avondale Mills, Syacauga, Ala. Mr. Paul B. Halstead was re-elected Secretary-Treasurer.

Textile Machinery Export Group in England.—With reference to the names of members of the Executive Committee of the Textile Machinery and Accessories Industrial and Export Group, which appeared on page 180 of the December 1944 issue of the *Journal*, we are informed that the names " Mr. D. Dickinson " and " Mr. J. T. Gailly " should read as " Mr. H. Dickinson " and " Mr. J. T. Gailey." Mr. Reuben Jones, of Jones Textilaties Export Co., Ltd., was elected to the above Committee on 14th July last on the retirement of Mr. F. J. Grimmer of Wilson Bros. Bobbin Co., Ltd.

Mr. M. A. Quadir, General Manager, Government Silk Weaving Factory, Mysore, has been appointed Principal, Bhagalpur Silk Technological Institute. **Mr. A. Meccai** has been appointed General Manager of the Mysore Factory.

Mill Staff News

MR. M. A. GAFFOOR

New Manager of Osmanshahi Mills: Mr. M. A. Gaffoor.—The Osmanshahi Mills' Staff Club got up an "At home" on the 4th inst. in honour of Mr. E. J. Tarapore, Manager of the mills, on his transfer to the head office, Hyderabad. Speeches were made eulogising the services rendered by Mr. Tarapore, particularly for the benefit of the staff, to which he made a suitable reply.

On the same occasion Mr. M. A. Gaffoor, Carding and Spinning Master of the mills, was also felicitated on his appointment as Manager of the mills in place of Mr. E. J. Tarapore. Mr. M. A. Gaffoor is a L.T.M. (Hons.) of the Victoria Jubilee Technical Institute, Bombay. After completing the course in this institute he joined the Osmanshahi Mills in the year 1935 as a spinning assistant. His services were then transferred to the sister mills— Azamjahi Mills, Ltd., Warangal, as Carding and Spinning Master, in which capacity he continued to serve till 1941. He was again transferred to the Osmanshahi Mills, Ltd., Nanded, in the year 1942 as Carding and Spinning Master. The services rendered by him all these years have won for him the distinction of now being the Manager.

Mr. K. C. Saha, B.Sc., L.T.M. (Honours), has been confirmed in his post as Works Superintendent in the Vikram Mills Ltd., Ahmedabad, with effect from 1st February 1945 after the completion of his probation of six months. Hailing from Bihar, Mr. Saha had his education in Bengal throughout and passed his B.Sc. with distinction from Rajshahi College in 1936 and later passed L.T.M. with first class honours from Bombay. After receiving his practical training in Kohi-Noor Mills, Bombay, he joined the Ahmedabad Manufacturing and Calico Printing Co., Ltd., as a Weaving Assistant and subsequently worked as Assistant Weaving Master in Asarwa Mills Ltd., Ahmedabad, and Birla Cotton Spinning and Weaving Mills, Ltd., Delhi, until he joined the Vikram Mills, Ltd., very recently; he is the officiating Weaving Master in the same mills.

Obituary

Mr. T. S. Pillay, Chief Controller of Purchases, Supply Department, Government of India, died at his residence in New Delhi on 24th March 1945 following a heart attack.

Mr. Pillay was born on 14th April 1899, and joined the Indian Audit and Accounts

Service on 7th February 1923. After serving in various capacities, he became Secretary of the Central Board of Revenue in May 1938. He was appointed Deputy Secretary, Commerce Department, and Secretary, Economic Resources Board, in 1940; Officiating Joint Secretary, Commerce Department, in 1942; Joint Secretary, Industries and Civil Supplies Department, in 1943; Deputy Director-General (Supply) in 1943; and Chief Controller of Purchase (Supply) in 1943.

Professor John Keats Catterson-Smith, M.Eng., M.I.E.E., University Professor of Electrical Engineering, King's College, London, England, died on 25th January 1945 at the age of sixty-two. He was educated at the City of London School, the South-Western Polytechnic and Birmingham University and was Bowen Research Scholar at Birmingham. For three years he was with the Siemens Dynamo Works and in 1907 commenced his scholastic career, eventually being lecturer in electrical engineering at Liverpool University from 1909 to 1912. During the subsequent three years he was chief assistant to Mr. Silvanus P. Thompson at Finsbury Technical College and, later, acted in the same capacity to Dr. W. H. Eccles.

He held a commission in the R.N.V.R. during the last war and became experimental wireless officer in the *Vernon* and at the signal school. After a period as lecturer in electrical machinery at Faraday House he came, in 1923, to India to become Professor of Electric Technology in the Indian Institute of Science at Bangalore of which he was elected an honorary fellow. While in India he founded *Electrotechnics* and was its editor until his return to England in 1930.

Cotton Mills in India

Bombay Millowners' Annual Statement

THE Bombay Millowners' annual statement for the cotton year ending 31st August 1944 contains, as usual, the names of cotton spinning and weaving mills, erected or projected, in British India and Indian States, as also the names of the agents or owners; particulars of share capital; the number of spindles and looms, erected and working, in each equipped mill, the quantity of cotton consumed in candies; the average number of hands employed daily; and the average number of days worked by each mill during the year. In addition, the statement contains statistical summaries showing the growth of the cotton mill industry in India as a whole, in Bombay City and Island, Ahmedabad, and the Province of Bombay including Sind but excluding the cities of Bombay and Ahmedabad, since the year 1904.

The mill statement is divided into three parts: Part I contains detailed particulars of the mills in Bombay City and Island, and such particulars as are available of the mills projected or in course of erection throughout India, during the year. Part II contains particulars of mills in Ahmedabad and that portion of the Province of Bombay outside the cities of Bombay and Ahmedabad. Part III contains particulars of mills situated in other Provinces.

The following statistical table brings out the essential features of the industry in the year under review as compared with the preceding year:—

	Year ending 31st August	
	1943	1944
Total number of mills	401	407
Paid-up capital	Rs. 48,54,20,089	Rs. 52,71,63,411
Spindles installed	10,130,568	10,222,107
Spindles working	9,402,397	9,493,784
Looms installed	200,890	201,761
Looms working	186,992	189,241
Approximate quantity of cotton consumed (in candies of 784 lbs.)	2,445,109	2,422,822
Number of hands employed (day shift)	502,650	505,562

REVIEWS

Indian Textile and Engineering Diary, 1945. Published by John Worrall Ltd., Oldham, England (**Indian Agents: W. H. Brady & Co., Ltd., 42, Churchgate Street, Bombay**).

This annual publication, compiled as a medium to develop mutual trade relationships between the makers and merchants of textile machinery and accessories and the textile and allied firms in India, is now in its 56th edition. It carries the message of industrial progress and research carried out by British textile machinists to India; it includes the announcements of many Indian houses whose desire is to serve the Indian textile industry and brings a message of goodwill for the future prosperity of Anglo-Indian trade.

It has been the constant aim of the publishers to increase the scope and utility of the volume and in the edition under review they have introduced an entirely new section covering the various fabrics produced by Indian manufacturers so that buyers may ascertain quickly and easily the sources of supply for any particular cloth. Much additional information has also been added to the mill entries during the past twelve months, so that the Diary and the Directory of Indian mills should be invaluable as a reference volume to every textile man in India.

Capital: Indian Industries, Trade and Transport Supplement, Calcutta. Price: Rs. 2-0-0.

Out of a number of able contributions that go to make up the supplement under review, we may refer to two articles on the cotton textile industry, one on factory tea canteens and one on social security schemes in India. The first article on the cotton mill industry refers to Sir V. N. Chandavarkar's plea that, in view of the acute textile shortage that will face the world in the immediate post-war years and the impotance of maintaining production at as high a level as possible, existing manufacturers should be given all facilities for rehabilitation before reconstructing industries destroyed during the war. But this problem of rehabilitation has been accentuated by Lancashire's post-war plans. If Lancashire mills are to be re-equipped on anything like the contemplated scale, the chances of Indian mills, most of which are equipped with British machinery, obtaining all their requirements from England at the same time may be somewhat difficult. It is considered that, except in cases where complete new plant or branches of plant are to be installed, American-made textile machinery will be of little use. So, perhaps, India's attention, it is thought, may be diverted to Australia where several firms hold Lancashire patents for textile machinery.

In the second article, Mr. P. C. Jain examines trends of cotton mill dividends and finds that in 1943 cotton mills paid an average dividend of 26.82 per cent., which is slightly lower than the 1942 dividend; they are expected to fall still farther for 1944 owing to the high costs of production and control over prices of the finished product. An examination by a Calcutta contemporary of the balance-sheets of a group of cotton mills for the year 1944 shows that the dividends took up only about 11 per cent. of the net profits while more than 75 per cent. of the net profits were taken away by the State as taxation. A third article describes the efforts of the Indian Tea Market Expansion Board to assist mill and factory owners to establish tea canteens from which tea and other refreshments could be served to the workers at reasonable prices and with minimum dislocation and loss of working time. It has been proved that tea served during a shift promotes concentration and helps to maintain output at a high level.

Plan for Labour. By Kanji Dwarkadas. Published by Thacker & Co., Ltd., Bombay. Price: 8 annas.

Coming as it does from one who has been connected with the labour movement in India for over twenty-five years the criticism and suggestions contained in the small booklet under notice call for serious consideration. He tackles the problem of the housing of the industrial worker, of his health and hospital and medical facilities available to him, of his conditions of work and the availability of the most essential needs of life like water, nutritive food, sanitary arrangements, etc. That there is unimaginable overcrowding in the worker's *chawls* and that most of the chawls are ill-kept are common knowledge. Mr. Kanji considers that, in any attempt to raise the standard of living of the worker, the worker has been "fighting a losing battle," so long as the housing conditions are as bad as they are and so long as the wages are inadequate. He accounts for absenteeism in mills and factories by the worker's continuous illness and convalescence. He quotes the opinion of the Textile Labour Inquiry Committee that the medical and hospital facilities in the industrial area are woefully inadequate although fortunately many Bombay mills have their own dispensaries. He finds that owing to fatigue, strain and ill-health the Bombay mill worker becomes unfit for work between the ages of 45 and 50. He proposes, therefore, that, in the next five years, the weekly hours of work must be reduced from 54 to 48 or 45; that the State and the Municipality should take on the burden of industrial housing with the financial assistance of the millowners; that more medical and hospital facilities should be afforded by the efforts of the Government, the municipality and the employers; and that the question of education and feeding of the children of the working classes should be tackled without delay. Mr. Kanji Dwarkadas suggests that the Government of India should set apart for industrial housing about 12½ per cent. of the excess profits tax collected by them during the last five years.

NOTICES

British Empire Trades Index, 1944-45 Edition. Published by Business Dictionaries Ltd., 133-137, Fetter Lane, London, E.C.4, England.

The latest edition of this well-known annual publication has more than maintained the standards of fullness and accuracy which it has set before itself. Divided into five sections, the first section gives classified trade lists of manufacturers, producers and distributors, with their cable and postal addresses as well as telephone numbers. In the second section we have the names of the firms alphabetically arranged and cross-referenced to the first section, where trade particulars are formed under numbered classifications. The third section deals with trade marks and brands register and the next one with the overseas cable addresses alphabetically arranged. There is a section specially devoted to the United Nations towards the end of the volume.

The Bombay Textile and Engineering Association : Annual Report for the year ended 1944.

The Bombay Textile and Engineering Association has just passed another year of useful activities. One of its Founders and Vice-Presidents, Mr. Cowasji Dorabji Panday, died during the year and the Association raised a sum of nearly Rs. 700 as a memorial fund. Nearly Rs. 400 were spent on an oil painting of the late Mr. Panday, which was unveiled at the Association rooms by Sir Homi Mehta, K.B.E. Out of the balance the Association has set apart a sum of Rs. 100 for three prizes of the value of Rs. 50, Rs. 30 and Rs. 20 for the three best essays on "Practical Suggestions for the Improvement and Maintenance of Efficiency in the Different Departments of a Cotton Mill."

Bulletin of the Madras Presidency Electric Licensees Association, 4, B.—The issue under notice contains an able appreciation of Mr. H. M. Mathews, Electrical Commissioner with the Government of India, and puts forward the following plea regarding manufacture of electrical goods in India:—

"Now that ultimate State control of electricity supply has been almost definitely decided upon, it appears that one way of rewarding the pioneer work done by electric supply companies and making it easy for them to switch off their careers from this field would be to give them some preference in the starting of electrical manufactures. Their existing sphere of work will greatly assist them in consuming their manufactures for some years to come. They can also thus help their shareholders to change over from their present narrowing field of investment to this other expanding field."

Distribution of Electricity, XVII, 157. Published by W. T. Henley's Telegraph Works Co., Ltd., Milton Court, Westcott, Dorking, Surrey, England, the latest available issue of this house organ includes a very interesting review of Mr. David Lilienthal's account of the Tennessee Valley Authority in the Penguin Special Series. The T. V. A. has assumed special significance in India where the idea has caught on and the Damodar Valley Authority has already come into being.

Mercantile Law. By James Menezes, LL.M. With a foreword by the Hon'ble Mr. Justice Blagden. Published by Vora & Co., Publishers Ltd., 3, Round Building, Kalbadevi Road, Bombay 2.

Mercantile law includes the law relating to companies, partnership, contract, sale of goods, negotiable instruments, insolvency and insurance, among other mercantile topics. Being complex and extensive, students of commerce have long felt great difficulty in understanding the principles involved, and the book under review, which has no more than 320 pages, must come as a godsend to them. The value of the book is enhanced by a carefully compiled index.

CALENDAR

We have, as usual, received a copy of a wall calendar for the Hindu New Year which commenced on Wednesday the 14th March 1945 from the **Sree Gajanan Mills, Sangli, S.M.C.** Each sheet of the calendar has space at the right for memoranda and gives both the Hindu and the equivalent English dates and other particulars.

The Allen Two-stroke Diesel Engine

W. H. Allen Sons & Co., Ltd., Bedford, England

A NEW internal combustion engine which extends the range of Diesel units is now being constructed by W. H. Allen, Sons & Co., Ltd., Queens Engineering Works, Bedford, England.

This Diesel engine is of particular interest as it is an example of modern practice in two-stroke engine design. The engine, which operates on the Harland and Wolff/Burmeister and Wain uniflow scavenge system and is known as the Allen type T47, is rated at 135 b.h.p. per cylinder at a speed of 375 r.p.m. and constructed in from three to eight cylinder sizes, giving powers up to 1,080 b.h.p.

Externally the engine is characterized by an exceptionally clean appearance, but this has not been achieved at the sacrifice of accessibility. Hinged covers give access to the cylinder heads in a similar manner to that previously adopted on this company's four-stroke engines. Additional hinged cover plates are provided for access to each of the fuel pumps, and the normal inspection doors are provided at the front and back of the engine for access to the main and big-end bearings.

Unlike loop scavenge engines in which the air for combustion and the exhaust gases have to pass through adjacent ports in the cylinder liner simultaneously, this engine works on a uniflow scavenge system. Inlet air is passed to a belt round the cylinder liners from a positive displacement rotary blower, and the whole periphery of the liner is available for inlet ports. The exhaust gases are ejected through two poppet type exhaust valves placed vertically in the cylinder head, and operated by a single push rod and forked rocker lever. Excellent scavenging is said to be achieved by this means, as there is no confliction between the path of exhaust gases and the inlet air, and a surplus of air is employed for flushing out the combustion space and cooling the valves.

The result of this efficient scavenging system enables the engine to work at a B.M.E.P. of 76 lbs. per square inch, which is comparable with the pressure of four-stroke engines of the same class, and at the same time gives an excellent fuel consumption of under .37 lb./b.h.p./hr. at full load, with an absolutely clear exhaust.

It is understood that the outputs at which this Allen engine is rated are very conservative, and considerably higher outputs could be obtained without evidence of distress or increase in fuel consumption per horse-power hour.

The pistons which are, of course, of the trunk type, are cast iron with a concave cylinder crown, and are oil cooled.

Due to the fact that the compression and ignition loading on the bearings is considerably in excess of the inertia loading, and that every downward stroke of the piston is a firing stroke, there is no reversal of loading on the big-end and little-end bearings. This, combined with the exceptionally large diameter of these bearings in relation to the cylinder bore, has resulted in a smooth and quiet running unit, the performance in this respect being claimed to be considerably in advance of any four-stroke engine.

It is only natural that comparisons should be made between an engine of this type working on the uniflow scavenge system, and the supercharged four-stroke engine, as well as the loop scavenge type of engine, which are also being produced at the present time.

The makers of this two-stroke engine claim that by the use of poppet type exhaust valves, they have overcome the difficulties associated with two-stroke engines which mainly centred round the overheating and fouling of exhaust ports, and the tendency to crack pistons or cylinder heads due to the high temperatures experienced with poor scavenging, or an insufficiency of air for combustion. Certainly there would not appear to be anything unorthodox about the arrangement of the valve gear as similar parts have proved their reliability and endurance on four-stroke engines running at higher speeds and temperatures.

A further feature of this type of engine, which will appeal to many buyers of engines for installation in the more remote areas, is the reduction in weight and overall dimensions which has been achieved without resort to high running speeds. Not only will maritime freight be cheaper than for the four-stroke type of engine of the same output and speed, but the individual weights to be handled by rail or road will be correspondingly less. This is a feature which is too often disregarded when little or no experience of improvised bridges and transport has been gained.

Some saving in the cost of installation may also be anticipated with this type of engine by virtue of the smaller engine-room space, and lighter lifting tackle required.

The production of the Allen two-stroke engine will be arranged to meet the demands covering a wider range of application for public service and industrial undertakings in all markets, as well as marine auxiliary purposes, according to the conditions governing the supply of engines for priority requirements.

Constructional Details

The engine is of the vertical, airless injection, compression ignition type, operating on the uniflow two-cycle principle.

For 3 to 6-cylinder engines the cylinder block is in a single casting, and for 7 and 8-cylinder units it is formed in two castings with a vertical joint. The block is secured to a deep section bedplate, and ample inspection doors are provided at the front and back for access to the big-end and main bearings, etc. The top face of the bedplate is slightly above the centre-line of the engine crankshaft, and the bedplate forms an oil reservoir.

The crankshaft is made from a high quality steel forging of liberal dimensions which are appreciably above Lloyd's requirements for marine engines. A solid forged half coupling for carrying the flywheel is provided.

Forged steel connecting rods of round section are fitted, and these are hollow bored, in accordance with the best marine practice. The big-end bearings are drop forgings, white-metal lined, and provided with four high-tensile steel bolts. A renewable bush of large diameter is provided for the small end.

The cylinder heads are separately detachable and are made of special heat-resisting cast iron. Ample waterways are provided for the passage of water from the cylinder jackets through accessible external connections. Two exhaust valves operated from a single fulcrum are mounted vertically in each cylinder head. The fuel injection valve is centrally disposed, and a spring-loaded pressure relief valve is fitted. Provision is made for taking compression and maximum cylinder firing pressures. The cylinder heads and valve gear are enclosed under hinged steel covers, the opening of which provides the maximum accessibility.

The liners are made of special close-grained cast iron and include the scavenging air inlet ports, which are machined and shaped to give vertical swirl. Each liner is completely machined, closely inspected for hardness, and finally hydraulically tested to a pressure of 1,000 lbs. per square inch.

The design of the pistons provides large bearing areas, and the gudgeon pin, which is inserted from underneath, provides a larger bearing area than is possible with a gudgeon pin passing through the piston. The pistons and gudgeon pins are cast iron of special quality, and are oil cooled.

A combustion chamber of the open type is employed, and the form has been designed to achieve efficient combustion combined with low fuel consumption. The piston crowns are concave, having a profile giving efficient turbulence.

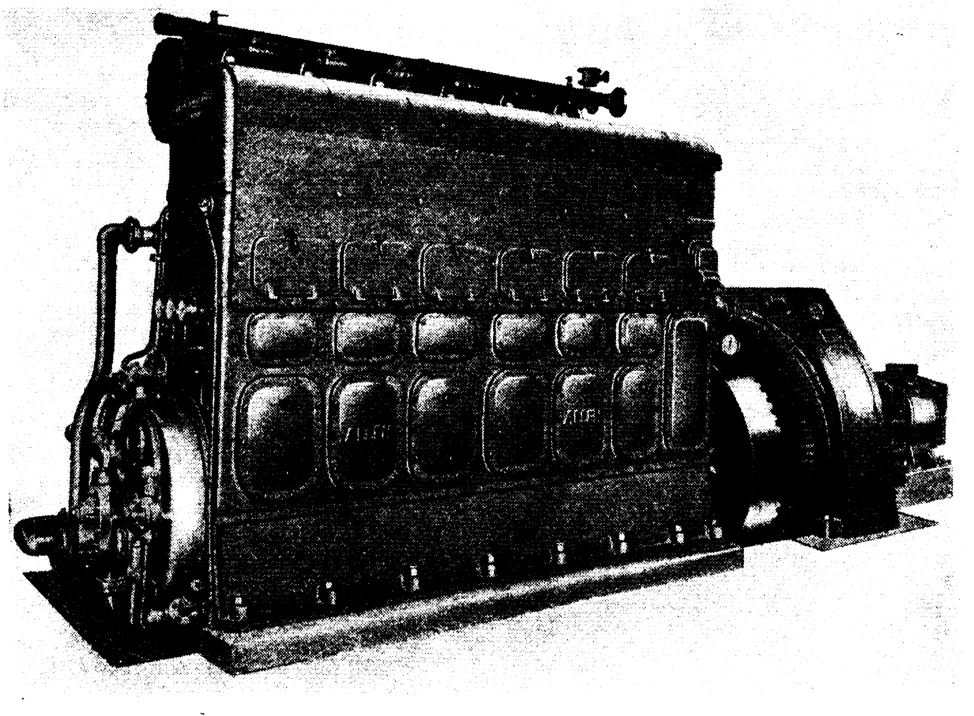
A separate fuel pump is employed for each cylinder, the pump being mounted high in the engine frame, and directly actuated from the camshaft. This arrangement enables individual adjustment of each pump to be carried out in order to obtain equal distribution of load over all the cylinders, and the proximity of each pump to its injector and the use of similar interconnecting pipes ensures that this distribution is maintained under all conditions of load.

The pumps are of robust construction and simple in operation, and all are easily accessible for adjustment. The quantity of fuel oil injected into the cylinders is regulated according to the load required by the engine governor, which acts directly on each fuel pump through a control shaft running the length of the engine. On entering the fuel system of the engine, the oil first flows through an accessible twin-compartment filter and then passes through edge type filters which are incorporated in the inlet to each of the fuel injectors.

A governor of the spring-loaded centrifugal type acts directly on the fuel pumps to regulate automatically the fuel supply at all loads. The governor is very sensitive, the engine speed being held within the limits specified in B.S.S. 649/1935, and the adjusting handwheel permits this speed to be varied while the engine is running. The governor is driven from the crankshaft by the same roller chain that is employed to drive the camshaft.

The blower which is fitted on the back of the engine is of the positive displacement rotary type driven from the crankshaft by roller chain and spur wheel through a resilient coupling.

The camshaft, which is carried in the engine frame, is driven from the flywheel end of the



6-Cylinder, 810 b.h.p. Allen Two-stroke Diesel Engine direct coupled to a 550-K.W. alternator crankshaft by means of a roller chain, and all camshaft bearings are force-lubricated. The exhaust valves for each cylinder are operated by a single push rod equipped with its own return spring, the lower end of the rod being guided by a large diameter plunger which carries roller followers for the cams.

A medium pressure, forced feed lubrication system is employed, the oil being contained in the engine bedplate. The oil pump is of the gear type, driven directly from the engine crankshaft, and it supplies the piston cooling and engine pressure system through an oil cooler via a large double-compartment gauze type filter. Oil passes through the main bearings to the big-end bearings and then up the connecting rods to the small-end bearings, while an independent supply feeds the camshaft and governor. A hand priming pump is incorporated in the system to enable all parts to be supplied with oil before starting up. The oil pressure may be regulated by means of a spring-loaded by-pass valve.

The engine is intended to operate with an independent cooling water pump passing water through the oil cooler to the cylinder block. After circulating round the liners, the water continues through external connections to the individual cylinder heads which have independently adjustable control valves and dial type thermometers. A double seal between the water space and the air inlet belt is provided with tell-tale vents which indicate any water leakage past the first rubber sealing ring.

Starting is effected by means of compressed air admitted at a pressure of 300 lbs. per square inch. Independent starting air valves are provided for two or three cylinders depending upon the size of the engine.

The inlet to the blower is normally provided with an air silencer. To meet special requirements a combined silencer and filter can be fitted.

The exhaust manifold is of cast iron lagged with asbestos and fitted with a sheet steel cover. A high reading exhaust thermometer is provided in the branch from each cylinder.

Thermometers of the dial type are provided for the inlet water, and also for the lubricating oil temperature after the cooler.

Pressure gauges are supplied for the lubricating oil system before and after the filter, and for the cooling water system.

A tachometer is positively driven from the camshaft.

W. H. Allen, Sons & Co., Ltd., Bedford, England, are represented in this country by **Guest, Keen Williams Ltd.,** who have their offices at 7 Council House Street, Calcutta, Bhandup Works, Bhandup, Bombay, 200 Mount Road, Madras and P. O. Box 17 New Delhi and Simla.

Mill Machinery and Colour

OF all exhibitions with which the E.L.M.A. Lighting Service Bureau has been concerned, there can hardly have been one which so successfully tells its story at first sight as the exhibition of lighting and colour for cotton mills arranged by the Recruitment and Training Department of the Cotton Board in Manchester, England. The choice of attractive colours for painting machinery is comparatively new in this country, but no one after seeing the examples in this exhibition could deny its value as a means of promoting cheerful working conditions and making the most of well-planned lighting, says *the Electrical Review.*

Perhaps the most outstanding example of what a calculated combination of light and paint can do is provided by a roving frame and a ring frame which have been treated respectively in blue-green, blue-grey, Devon red and bottle green, and sandy yellow, crimson and signal red. All the colours with the exception of the last (used on control apparatus) are in soft pastel tones. The walls surrounding these machines are in ivory with a dado in pale bottle green. The lighting installation, suspended from the white ceiling, consists of some open and some closed-top fittings each containing an 80-W, 5-ft. fluorescent lamp. Daylight can also be admitted in this instance to demonstrate the excellent effect achieved by supplementing daylight with fluorescent light.

How the inconvenience of the overhead harness of Jacquard looms can be overcome is shown by a system of single fluorescent lamp fittings installed lengthwise with the looms and the winding frames and two-tube fittings crossways between the looms. Each thread and eye are clearly visible, 40-ft. candles being achieved on the breast beam and 20-ft. candles on the beam at the back without shadows. The principles of modern lighting are also demonstrated by a series of cabine displays.

Commercial and Technical Organizations

Annual Stock-taking by Commercial Bodies

Bombay Chamber of Commerce

H. E. The Governor on Return to Constitutional Government

" *We still have a Section* 93 *Government,*" *said His Excellency Sir John Colville, Governor of Bombay, at the latest annual meeting of the Bombay Chamber of Commerce held on* 14*th March* 1945, " *and I have not yet been able to hand over control to a representative Ministry. I am not going to enter the field of controversy by expressing any views on whose responsibility it is that this condition should continue, but I know that my Advisers will not misunderstand me, in fact they will be the first to agree with me, when I say that I shall welcome the day when constitutional and representative Government is restored, as a sign of progress and goodwill. I can say, however, with confidence that were the Section* 93 *regime in Bombay to be replaced to-morrow, whatever Ministry took office would find that the Bombay Government, under official Advisers, had been markedly progressive, and had not taken any narrow view of its functions.*"

" PERHAPS the most encouraging development for the future of the province," continued His Excellency, "has been the great promise which the very large-scale land development work to which we are committed in some scarcity areas of the province shows. We have also made rapid progress with our plans for post-war development, and in this sphere, too, I think we have been able to show the way to others. And I emphasise that, were my good friends and Advisers to be replaced to-morrow by an elected Ministry, whatever Ministry it was would find that the Section 93 interlude was by no means a period barren of achievement."

The following are extracts from the speech of Mr. C. P. Bramble, President at the meeting:—

Official Control and its Vagaries

" However much we may dislike control in principle, and aggravated though our dislike may be by its clumsy application in practice, we should do well to face the fact that it will not cease with the end of the war. How long it will last is anybody's guess; but it seems obvious that the rehabilitation—by which I mean nothing more than the feeding and clothing—of half the world, will be the concern and moral duty of the other half, for perhaps years to come.

" That control should be carefully and efficiently exercised is a counsel of perfection; and the appointment of a controller of controllers has been facetiously advocated. There is, however, much to be said for submitting all control orders to a special department in the same way that Bills are sent for drafting to a Legal Remembrancer.

" There are, however, some extraordinary inconsistencies as well as inexplicable inaction on the part of senior officials in important matters. The Export Trade Controller has occasionally taken a firm line by posting a merchant in the black-list and denying him any further export licences; but the merchant, as often as not, is enabled to continue trading because his current licences have not expired, and have not been cancelled. Even after the expiry of his current licences, which may be a matter of four months, the merchant does not necessarily feel it expedient to return to his native land—usually Persia or Iraq—because other merchants, not yet on the black-list, may value his market connections and facilitate his trading, nominally on their behalf and under cover of their licences . . . . They should all be prohibited from engaging in further export business.

Amending Industrial Disputes Act

" It is, perhaps, one result of Section 93 rule in this Province that there is little provincial legislation that calls for comment. Even so the one point I have to make is important in our eyes. The Bill to amend the Industrial Disputes Act permits the labour officer to call a meeting of labour inside a mill's premises without having first obtained the mill's consent. This might conceivably be necessary as a temporary measure —though that is a matter of opinion—but the power should not be permanently vested in the labour officer in the terms of the statute book; and our opposition to its being there is not lessened by the thought that consultation with the interests concerned, before the promulgation of the Bill, might have had other results.

Government of India Bills

" Amongst the Government of India Bills recently circulated for opinion there are two which, if passed, would have far-reaching effects on the trading community. The Bill to consolidate and to amend the law relating to banking companies has little to be said for it.

" The other piece of legislation introduced during the year which has caused us some concern is the Insurance (Second Amendment) Bill 1944."

In seconding the adoption of the report and accounts for the year, Mr. W. L. A. Radcliffe, Vice-President, said:—

" If I were asked to paint a picture of business during the past few years I would say that these years have been one continual struggle against shortage of materials, a period of rising prices and rising wages and rising taxes, a struggle with Controllers who do not know what they are controlling or how to control it, and lastly an unending battle against a feature, which unfortunately is coming more and more to the fore, the black market. This black market is a crying scandal and I am sure I voice the feeling of you all when I say that we want the severest penalties and sentences passed against those who indulge in this lowest form of money-making.

"These matters which I have mentioned have been common to us all during the war, but what of the future? No one can prophesy what will happen but my own feeling is that controls will have to carry on to a large extent. Materials and goods will, I hope, become more readily available and will tend to eliminate the disgrace of the black market. Whatever may come to pass, it is the duty of all of us to see that the harmonious undertones of peace do not turn into a glaring discord, and it is for this Chamber to give the lead to our business community. I, therefore, say that difficult times are ahead and I am only too glad to know that we have a President of the calibre of Mr. Bramble to help us."

The meeting elected the following members, besides the President and the Vice-President, to the Committee for 1945-46:—Messrs. C. R. Agar, R. W. Bullock, C. J. Damala, A. D. Finney, D. R. C. Hartley, W. Kerr, H. C. Demierre and W. G. J. Shaw.

Essentials of Effective Control

Bombay Millowners' Chairman Emphasizes Government's Responsibility

"Unless Government are in a position to make freer supplies of raw materials and coal to the industry and exercise complete control over the provincial authorities in the matter of distribution of cloth made available to them, any scheme prepared by the Textile Directorate will remain a scheme on paper only"—so said Sir Vithal Chandavarkar, Chairman, the Millowners' Association, Bombay, in the course of his speech moving the adoption of the latest annual report of the Association at the annual general meeting held on Wednesday the 11th April 1945.

"In the matter of exports," Sir Vithal continued, "we are not our own masters . . . if we had our way, we would have permitted exports only to those countries which are likely to retain their custom with us after the war . . ."

THE following are extracts from the speech:—

"The cotton textile industry in India had another year of prosperity, but the trading results of 1944 were on the average, on account of the price reductions brought about by the Textile Control Board and other factors, about 25 to 35 per cent. lower than those of the preceding year, and in certain cases, profits had dropped off even to a greater extent. Production, however, was maintained at the peak figure of 4,800 million yards of cloth and 1,600 million lbs. of yarn.

"In the year 1943-44, the quantity of cloth available for civilian consumption in the country including the production of the handlooms, was about 6½ per cent. less than the quantity available in the five years preceding the commencement of the war. In the year 1944-45, the quantity available for civilian consumption is estimated at 11¼ per cent. less than the pre-war average. Expressed in terms of an average consumption per head, the drop in supply may work out at a slightly higher figure than I have indicated, on account of the increase in population which may have taken place since the commencement of the war, but even so, the extent of the reduction should not warrant a famine in cloth of the size and nature we read in the papers these days. If the facts stated in the Press are correct, then the responsibility for the state of affairs must rest on the authority in charge of transport from the producing to consuming centres and on the provincial authorities who are charged with the responsibility for ensuring that the civilian consumer gets his cloth at the retail prices stamped on the piece. The results of the recent police raids organized in Calcutta indicate that, in Bengal at any rate, the fault did not lie with the supplying centres, but with the provincial authorities whose business it was to prevent cloth being hoarded up. Bengal has been singularly unfortunate in her experiences with grain and cloth, and if the Government of India really desire to avoid similar situations in other provinces, they should, without any delay, accept the recommendations made by the Textile Control Board from time to time, **and the cloth and yarn controlling authorities all over India should be brought under the control of and made directly subordinate to the Textile Commissioner appointed by the Government of India. Unless this is done, I am afraid that there will be no improvement in the situation which now exists in individual provinces in the country.**

Limits to Increased Production

"It has been repeatedly emphasized in the Press that production in the Indian cotton textile industry can be stepped up to 6,000 million yards per annum. I admit there is room for improvement, but not to the extent indicated, and those who bank upon the peak production of 6,000 million yards are placing their hopes on two factors over which neither the Government nor the industry have any control. The first is the availability of raw materials and coal, and in this connection, as you are aware, a large number of units had to be closed down for varying periods in the year under review due to shortage of coal. It will be interesting to note that, in Ahmedabad alone, shortage of coal was responsible for the loss of production aggregating to 48 million yards in the first three months of 1945. The next factor over which we have no control is the workers' tendency to take occasional holidays under the guise of *hartals*, and in this connection you will all remember that it was only a week ago that a serious dislocation was caused in Bombay by a large body of workers absenting themselves for about three days, resulting in loss of production estimated at 20 million yards. Before suggesting ways and means of increasing production, I do not think that there is a single millowner who is not anxious to take advantage of the present times by increasing production to the utmost capacity, and who is not prepared to take full advantage of any facilities made available to him for increasing productive capacity. But there are, as stated above, very real physical difficulties and disabilities which prevent mills from taking any steps to increase their productive capacity. The Textile Control Board and the Industries and Civil Supplies Department, I know, are now engaged on devising measures for increasing the production of cloth and yarn in the country, but **I would like to emphasize one fact, namely, that, unless Government are in a position to make freer supplies of raw materials and coal to the industry and exercise complete control over the provincial authorities in the matter of distribution of cloth made available to them, any scheme prepared by the Textile Directorate will remain a scheme on paper only.** Of course, in making these observations, I am not ignoring another difficulty which exists all over India, namely, the scarcity of trained labour even for day shifts, let alone the question of night shifts. There is another factor to which I shall have to draw the attention of the public, namely, that, even in a city like Bombay where hydro-electric power is available, mills are called upon to save power for essential war industries, and all sorts of schemes for staggering of working hours and working days are under the consideration of the authorities.

"Our friends, the critics, have repeatedly urged that the responsibility for the cloth shortage rests on the head of the millowners who, they point out, have deliberately denuded the country of all available supplies of cloth by exporting them out of the country at exorbitant prices. Let me tell you once for all that, **in the matter of exports, we are not our own masters. Exports of cloth have become a matter of diplomatic and strategic necessity forced on the country, but, so far as our industry is concerned, we recognize that the people of India have the first claim on the manufactures of the Indian cotton textile industry, and if we had our own way, we would have permitted exports only to those countries which are likely to retain their custom with us after the war, to those who would not discriminate against India and Indian nationals in any manner whatsoever in the post-war period, to those who would reciprocate by supplying raw materials, foodgrains, etc., to India on terms not less favourable than those accorded to any other country, and would further control effectively the prices of cotton manufactures within their own territorial limits.**

Labour

"In the year under review, there were 25 strikes in Bombay cotton mills, all of them in contravention of the provisions of the Bombay Industrial Disputes Act, resulting in a loss of 313,211 man-days as against 285,748 in the preceding year. In addition, 210,000 man-days were lost through *hartals* as against 380,000 in the previous year. Similar figures are not available for the whole of India, but in the six months ending June 1944, the cotton textile industry lost 1,686,604 man-days as against 1,178,446 in the same period in 1943. There is, however, no record of days lost on account of *hartals*, lack of fuel or other raw materials, etc.

"It has been stated in a section of the Press which specializes in distortion of facts, that war has resulted in a substantial drop in piece-work earnings in our cotton mills. War conditions, far from resulting in a drop in earnings, have actually led to an increase in piece-work earnings, and the basic piece-work earnings in the year under review were the highest on record since 1934.

"The increased time and attention which the Association and member mills in Bombay have recently been bestowing on labour and labour matters appear to have borne fruit, and the total number of complaints and grievances presented at the office of the Government Labour Officer by the workers of member mills in Bombay in the year 1944 was the lowest on record even from the inception of the Bombay Trade Disputes Conciliation Act. Several complaints during 1944 were, however, of such a trivial nature as would have been set right by the mill managers if the workers had approached them in the first instance.

Textile Control Board

"I feel that I must draw the attention of the industry to the tendency on the part of the Central Government, especially the Industries and Civil Supplies Department, to regard the Textile Control Board as the sole authority to be consulted on all matters affecting the industry. I can understand the Board being consulted by Government in matters connected with the Control Order, but I cannot for a moment subscribe to the view that in all other matters, Government—nor for the matter of that anybody else—would be justified in by-passing existing industrial organizations, and taking only the opinions of the Textile Control Board as representing the view of the industry. I honestly feel, though I am a member of the Textile Control Board, that Government's responsibility for consulting industrial organizations, wherever they exist, still remains in all matters which are not covered by the Control Order, and I have no doubt that no member of the Millowners Association, Bombay, would have agreed to co-operate with Government in working the Control Orders if it had been made clear to him at that time, that, by so doing, he was virtually voting for the supersession of the parent Associations by the Control Board in all matters.

"There is every sign of the war coming to a very early end. Controls are, however, likely to continue till normality is restored, but the question of revising them in the light of altered conditions which are likely to obtain after the war must be given early consideration by Government in consultation with trade and industry, and I hope that this aspect of the question will not be forgotten by the powers-that-be, as soon as the hostilities come to an end.

Rehabilitation

"A lot of ink has already been spilt on the question of capital goods for post-war industrial rehabilitation and expansion. We have been asked to place our orders, and register them with Government, but we are still to be told as to what our chances are of securing the machinery we have already ordered out. It would have been of very great assistance if the Government of India had—if they have not already done so—opened negotiations with the United States of America and the United Kingdom Governments with a view to ascertaining the extent to which, and the terms and conditions on which, capital goods would be made available to India in the post-war period, and announce the results; but our Government seem to be getting nowhere in this regard. I do not see the necessity for secrecy in this matter. The war is beginning to end, and it is of utmost importance that Government take us into their confidence so that we may adjust our position accordingly. While I have great regard for the individual efficiency of highly placed officers of Government, they cannot be expected to know all about our intricate mill machinery, and it might help to prevent a good deal of dissatisfaction later if those concerned would care to associate with them a committee of industrialists and take their advice before fixing up any arrangement with the United Kingdom or the United States of America.

" In my last year's speech, I raised the question of His Excellency the Viceroy appointing an Executive Councillor without portfolio who would function as the Chief of the Viceroy's Cabinet and would further control and coordinate the working of the different departments in matters directly or indirectly connected with the prosecution of the war. While the necessity for such an officer is still as great as ever, I would suggest that the scope of the present Labour Department should be considerably widened. In the United Kingdom, the Ministry of Labour looks after all wage-earners in the British Isles, whereas our Labour Department has no jurisdiction over labour employed in agriculture and plantations. More people are employed in agricultural operations in normal times than in industry, and the Labour Department would not be serving the real interests of labour if its functions were, as they are at present, to be limited only to industrial labour. Schemes of social security will loom large in the horizon in the immediate post-war period, and I do not see any justification for confining the scope of such legislation to labour employed in factories only. Agricultural labour is as much an asset to this country as labour in factories, and I would strongly recommend that the Government and the Legislature should bestow upon that labour as much paternal care and attention as they do on factory labour.

" Sir Frederick Stones, who had been a member of the Committee for the last 23 years, and the Deputy Chairman of the Association in the year 1927, resigned on grounds of ill-health, and his place on the Committee was taken by Mr. W. B. Bryden. It is impossible for me to adequately thank Sir Frederick for the extremely valuable work which he has put in during his long association with the Committee, and in this connection, special reference might be made to the very admirable manner in which Sir Frederick Stones and Sir Sorab Saklatvala conducted the Association's case before the Fawcett Inquiry Committee in the year 1928-29. In all matters, Sir Frederick's practical knowledge of the inner working of the mills has been of invaluable assistance to the Committee and the industry, and though he ceased to be a member of the Committee, Sir Frederick has not ceased taking active interest in the affairs of the Association."

Mr. J. C. Lancashire's Speech

Mr. J. C. Lancashire, in seconding the adoption of the report and the accounts for the year 1944, said:—

" Our Chairman has referred to the prospects of increased production by the industry. In this connection, I would like to point out that, towards the end of December, the Government of India issued a notification which limited mill output of cloth to the production ruling as at the end of September 1944. Your Committee protested energetically against this notification pointing out that it appeared inconsistent with the various appeals for increased output which had been made by responsible officers of Government from time to time. The matter was, I understand, later discussed in the Industry's Committee of the Textile Control Board and, as a result, the original notification was superseded by a new one in March, without, however, materially affecting the consequences. The Hon'ble the Commerce Member is reported to have stated in the Legislative Assembly recently that Government was concerned more with the total output of textiles rather than with the manner of its production. If this is so, I cannot quite reconcile that statement with the recent notification. The Textile Control Board was set up to assist in increasing the production and distribution of cloth and yarn at controlled prices, but by this notification Government would seem to be placing a premium on the manufacture of cloth which would not be subject to any price control.

"It is very probable that, in the immediate post-war period, several questions relating to handlooms and mills will come up for discussion with Government, and unless they are given the dispassionate and unbiassed consideration they deserve, more harm than good may be done, and lasting injury inflicted on both interests. The Association has already indicated its willingness to examine the question of mill production and handloom production with an open mind, but action on the lines set forth in the recent Government notification is likely to retard rather than promote fair consideration being given to the issues which may arise.

Yarn Supply for Handlooms

" I would like also to refer to the general question of supply of yarn to the handloom industry. We have been told on several occasions in recent months that the handloom industry has not been securing its requirements of yarn and that this state of affairs is mostly due to the fact that the Indian cotton mill industry is not supplying its normal quota to the trade. This statement cannot stand scrutiny since we are to-day supplying considerably more yarn to the handloom industry than at any time before the war. It may perhaps be that handlooms in particular centres have not been getting yarn in quantities and in counts which they now require. If this is so, then it is a matter over which the mill industry has no control, and the remedy for this state of affairs would appear to be more effective transport and equitable distribution arrangements, and above all, in the handloom industry adjusting itself to the abnormal conditions existing and brought about by the war. The lack of regular carrying facilities leading to long delay in despatch of goods still produces short supply conditions in distributing centres which assist greatly in the exploitation of the consumer. There has recently been some improvement in transport facilities, I am glad to say, but great delay is still being experienced by producers in getting their goods away.

Adarkar Report

" During the year under review, your Association has had under consideration Professor Adarkar's Report on Health Insurance for Industrial Workers, and subject to certain changes and essential safeguards, has generally approved of its provisions. Government has recently secured the services of two experts in health insurance matters from the International Labour Office who have put forward an amended scheme. It is rather refreshing to see this policy of careful investigation by Government, and it is certainly to be commended, since any resultant scheme decided upon eventually, will involve large expenditure of money by all parties concerned, including Government."

Flaws in Textile Control

Ahmedabad Millowners' Chairman Speaks Out

" It is paradoxical," said Mr. Sakarlal Balabhai, in his presidential address at the latest annual meeting of the Ahmedabad Millowners' Association, held on Saturday the 31st March 1945, *" that while Government in the different provinces on the one hand complain of the black markets, they do not, on the other hand, adopt the course suggested by the Textile Commissioner and the Control Board." Mr. Sakarlal was referring to the action of certain provincial Governments in refusing licences to mills to open their own retail shops.*

In the course of a lengthy speech, Mr. Sakarlal Balabhai covered a variety of subjects including control, exports, coal shortage, the Platt Report, Indian mill re-equipment, research possibilities, state ownership vs. *private enterprise, regionalization of industries and conversion to peace-time basis and the labour situation.*

THE following are extracts from the speech :—

" You are aware of the various measures adopted by the Control Board, including substantial reductions in prices from time to time which have been agreed to by the industry voluntarily.

" One of the major problems, however, was to eradicate hoarding, speculation and profiteering. In order to achieve these, various orders were passed by Government but unfortunately, they resulted in the creation of what is known as the black market. I may state that the inflated currency is responsible for this state of affairs to a great extent. Inflation, as you are aware, has made money cheap and, therefore, certain sections of the people obtain their necessities of life, including cloth, at any fancy price. At the same time, I think that the selling agencies, if better organized would contribute a lot in achieving our objective. One of the steps to prevent black-marketing would be to ask the manufacturers to open mill shops at as many centres as possible. The Textile Commissioner, on the recommendation of the Control Board, has decided to permit mills to open retail shops and has for this purpose allowed 10 per cent. of mill production. It is a matter of deep regret, however, that some provinces, including our own, have not responded and have not given licences to mills for opening retail shops. It is paradoxical that while the Government in the different provinces on the one hand complain of the black market, they do not adopt the course suggested by the Control Board and the Textile Commissioner. I have no hesitation in stating that experimental measures, such as opening of Government approved shops and rationing of *dhotis* and *saris*, are if anything mere palliatives of doubtful value. It is also wrong to attach sanctity to a particular period, such as basic years of 1940, 1941 and 1942. The urgent need is to provide cloth to the consumer at control rates, no matter who supplies him and how. He is not interested in any theoretical planning or any elaborate scheme, however great an intellectual feat it may be. I do not propose to discuss in details the scheme of distribution which has recently been introduced, but I cannot refrain from observing that while the distribution by the Textile Commissioner is commendable, as far as the mills and quota holders are concerned, the arrangement in regard to provincial distribution requires further consideration. I am aware that the provincial distribution will be done through governmental agency, but I venture to doubt the wisdom of this arrangement because in practical and actual working the Government will delegate the work to petty and subordinate Government servants and there is no reason to hold that they are immune to temptations or are as a matter of course better moulded than petty cloth dealers—perhaps the contrary. My suggestion is that if Provincial Governments are in earnest to make cloth available to consumers at control prices, they must for each area establish reliable agencies by inviting respectable and public-spirited citizens to undertake the work of distribution and by enabling manufactures to reach the consumers.

" We also hear that considerable quantities of cloth are being transported by road and some illegal traffic exists in the form of unauthorized exports by sea and land frontiers. Standard Cloth manufactured by mills is also not properly distributed with the result that a portion of the productive capacity of the industry remains ineffective or unutilized. I am of opinion that if these several matters are dealt with properly and if adequate facilities are given to the mills for increasing production, the present shortage would considerably diminish. The Government of India, under the plea of an alleged shortage, have allowed the import of large quantities of cloth in this country. I strongly feel that this is not a proper approach to the matter, which lies in the directions I have suggested above, and I hope that even if some imports have been permitted so far as a temporary measure till increased production is achieved, I trust the Government will restrict the imports in the immediate future.

Exports

"This brings me to the vexed question of exports. It seems paradoxical that India should export cloth from the country when our own countrymen are faced with an acute shortage of cloth. All of you are aware, however, that exports are being regulated more on political than economic considerations. I am strongly of opinion that even if exports be necessary on political grounds or to maintain foreign markets, there should be a complete ban for the time being because the necessities of our people should outweigh every other consideration.

Coal Shortage

"You are aware, gentlemen, that for the first time in the history of the textile industry in this centre, Ahmedabad mills were obliged to close down twice during 1945 on account of coal shortage. This is persisting even now. The shortage was so great all over the country that reluctantly in 1943, the Government were obliged, as a temporary measure, to permit women workers to work in coal-mines. In spite of this, however, the shortage continued and this hit hard the minor industries and has even affected the key industries of the country. In our own industry, mills at several centres were obliged to close down, resulting in a loss of production of 97 million yards in 1944 and 50 million yards in two months of 1945, equivalent to cloth requirements of nearly 1 crore and 20 lakhs of people for a year. The Ahmedabad industry alone in January and February 1945 lost a production of 25 million yards which would have clothed more than 20 lakhs of people for a whole year. When cloth is the crying need of the country one would have expected Government to ensure regular supplies at least to maintain the level of production. We are informed that the Government have recently rendered assistance to the coal mines for procuring stores and mechanical equipments. Late as it is, this measure is likely to yield some result and there is some hope that the situation will ease from the latter half of this year. The coal crisis has made us realize the condition in which our industry is placed. As an inland town, Ahmedabad, along with other handicaps, has often to face difficulties in obtaining coal. In order to overcome this difficulty your Committee considered the feasibility of obtaining alternative fuel, i.e., fuel oil. Even before the war, this project was considered but it was not pursued as it presented some difficulties. I feel, however, that these obstacles have to be overcome. As just a temporary measure, we are negotiating for obtaining fuel oil from Bombay. I cannot state at present as to whether we will succeed, but even if we do, the overhead cost and the difficulties involved will be tremendous and, therefore, it cannot be made a permanent feature. I, therefore, feel that we will have to consider a project of having a pipe-line for oil from some convenient port. All this, however, will be a long-term programme. Meanwhile, therefore, I trust, that Government will realize their responsibility for providing sufficient cloth to the country and will exert their utmost to assist us by alloting the required quantity of good coal.

Platt Report

With reference to Platt Report, Mr. Sakarlal observed: "It contains all details and figures in regard to production per man-hour. It will be patent that in comparison with the U.S.A. industry, our industry is also behind. In future planning, therefore, our first effort should be to increase the production per man-hour. I recommend to our new Managing Committee immediately to undertake an investigation into this matter. I envisage that their investigation will reveal that our industry and our workers are capable of much greater efficiency and output than at present, and that in order to survive we will have to introduce further rationalization. Since the beginning of the war, we have been concerned more with the quantity of our total output rather than with the cost of its production, which is excessive. It is now imperative, however, to readjust our cost-economics because in the competition to come, this will be one of the determining factors.

"A worker attends to approximately 1,300 spindles in U.S.A. and about 900 in the United Kingdom as against about 300 in India. In the weaving shed we are lagging behind to a greater extent. In the U.S.A. automatic looms cover 95 per cent. of the industry whereas they are practically non-existing in the Ahmedabad industry. These are matters of serious concern to the industry and I hope the Textile Labour Association will at long last abandon its attitude of opposing any scheme of increased production per man-hour in and out of season and will realize that the future of the industry will be in peril if their immediate co-operation is not available in this and other kindred matters.

Re-equipment

"As an immediate measure of planning, the industry will also have to consider the problem of the renewal and replacement of machinery. You are aware that we have been obliged to work our machinery at a high tension and it is a matter of regret and considerable disappointment that no adequate allowance is allowed from the excess profits tax to enable the mills for placing orders for replacement and renewals. The Government have no doubt allowed a certain amount of additional depreciation over the normal but this would be available after the actual replacement and renewals have been made. It is also disappointing that the Government of India have not yet been able to make any concrete arrangement with definite basis in regard to prices and terms of delivery of the machinery to be imported from abroad. It is obvious that without this data the industry could not make any plan just at present.

Research

"Some modern machinery has come to us years after they became common vogue elsewhere and scientific discoveries have come to us still later. This state of affairs can no longer continue. As a step in the direction of future planning we have decided to establish a Research Institute for

Textile Technology in Ahmedabad. It has been rightly observed that 'among constructive activities of trade associations, none is more fitting nor more profitable than scientific research.' I take this opportunity to offer you my most grateful thanks for your ready and willing co-operation. You are aware, gentlemen, that the Hon'ble the Finance Member has announced that the expenditure will be permissible for the purpose of income and excess profits taxes. The industry no doubt is thankful to Sir Jeremy Raisman and the Government of India for this facility.

"The Research Institute will be devoted both to fundamental and applied research. The former necessarily will be a long-term programme. In regard to our day-to-day problems the applied branch will no doubt tackle these, but I feel that there is greater necessity for giving unfettered scope to our scientists in the matter of fundamental research. It is not every year or every decade that gives out a new discovery, but when it does come, as is common knowledge, it brings a new orientation with a rich harvest of undreamt of results. We also propose to establish a separate section for the training of scientific men, for I feel that we will have to train our own men instead of sending out students to foreign countries for training. This latter might be necessary in the initial stage but we cannot continue to depend on the few persons trained abroad."

Planning

Speaking on industrial planning for India, Mr. Sakarlal pointed out:

" There is an inherent defect in the Government scheme of planning. To illustrate, there are three different departments, directly or indirectly connected with our economic issues, namely, the Department of Commerce, the Industries and Civil Supplies Department and the Department of Planning. For want of co-ordination of all the three, measures are being adopted by one department which directly conflict with the objective and policy of the other departments. For instance, as a short-term programme, the Commerce Department has decided to import what are described as consumers' goods in abundance under the plea that they are necessary to break the rising prices. These might have contributed to some extent to control the prices, but this upsets the planning programme inasmuch as most of these goods dumped into the market would have detrimental effect on the indigenous industries. It is, therefore, most essential that co-ordination should be achieved between these different departments.

" Simultaneously with the execution of the programme of post-war reconstruction, it is also essential that we should convert to peace-time activity. For this purpose, we must re-establish our contact with the lost markets many of which have been disorganized on account of distribution through governmental agency and this is possible only if the various measures of control are removed.

" Examining the growth and development of the industry in this country, one could state without any fear of contradiction that at the present stage of industrial evolution and political organisation, there is every justification for the continuance of encouragement to private enterprise. In the interest of the investing public and on the larger consideration of national interest some healthy restraints will, of course, be necessary where they do not exist.

" Another aspect to which I may incidentally refer is the problem of regional planning of the industry. I envisage that on account of the uneven location of our industry, some restraint is likely to be placed on the future erection of cotton mills in this province. From an isolated viewpoint, that is to say, merely from the standpoint of location, the subject deserves consideration. I feel however, that taking into consideration the productive capacity of the existing industry, our domestic consumption and the exports, there is little scope for any future expansion of the cotton textile industry even in the deficit zones, because there is considerable scope of increased output in the existing industry. Further more, if scientific planning of the industry is to be achieved, it will be necessary to require uneconomical small units to expand to the optimum size and unbalanced units to acquire the necessary *inter se* harmony and proportion.

Labour

" Labour in India during the year under review has received more than its due attention. As you are aware, it was essential for the Government to ensure the continuity of labour supply. To achieve this, various labour enactments and emergency measures were adopted including some that have far-reaching effects. The Tripartite Conference is also being remodelled and it is expected that in the future some important changes will probably occur. As you are aware, while the industry has all along been anxious for the amelioration of labour conditions in India, it has urged that labour legislation in this country should not be based on foreign concepts and standards as the conditions in this country are very different from those prevailing in foreign countries. This view was also urged at the International Labour Conference and it is gratifying to note that this plea has been appreciated and it has now been decided to convene an Asiatic Labour Conference which will meet shortly. It is too early to predict its future course, but I have no doubt that at any rate the discussions at the Conference will justify our plea for different legislation in this country. Speaking for our own centre, I may state without any fear of contradiction that labour here has been more fortunately placed than anywhere in this country.

" As you are aware, gentlemen, during the year 1944, the Ahmedabad industry, in spite of the highest wage level, paid on an average Rs. 789 per worker as dearness allowance, that is to say, the Ahmedabad worker received Rs. 414 more than the Bombay worker who received Rs. 375. In spite of this as a measure of expediency, your Committee were considering the grant of a war bonus for 1944. It was felt, however, in all quarters that cash allowances to workers were largely misused. This was also realized by the Textile Labour Association which had to initiate a compulsory savings scheme. In view of this, it was decided by your Committee that the bonus if paid should be in kind, that is to say, by creating a labour welfare fund and accordingly, suggestions were invited from the Textile Labour Association. I regret to state that as in the past they were not helpful with the result that the subject was not pursued further. Later, they served the Association with a notice of change, demanding four months' wages as bonus. Even the Chief Conciliator has expressed surprise at this exorbitant demand. Gentlemen, there has naturally been no agreement in conciliation and a report has been submitted to Government by the Chief Conciliator accordingly with the result that the dispute unfortunately continues.

"While I have no regrets for the excessive payments made to our labour, I have always been feeling that wages, emoluments and such other labour matters must be regulated on an all-India basis for otherwise one centre would be unduly penalized to an irreparable extent."

New Office Bearers

At the annual general meeting of the Ahmedabad Millowners' Association, held on Saturday the 31st March 1945, the following office-bearers of the Association were duly elected for the current year:—*President:* Mr. Sakarlal Balabhai. *Vice-President:* Mr. Ratilal Nathalal. *Members of the Managing Committee for the year:* Messrs. Ramanlal Lallubhai, Shantilal Mangaldas, Amritlal Hargovinddas, Madanmohan Mangaldas, Gautam Sarabhai, Narottambhai Lalbhai, Vadilal Lallubhai, Nanddas Haridas, Rasiklal Chandulal and Chandrakant Motilal.

Africa and Overseas Merchants' Chamber, Bombay

President on Irregularities in Export Trade

At the latest annual meeting of the Africa and Overseas Merchants' Chamber, Bombay, held on 14th February 1945, Mr. Dawood Hajee Nasser, President, drew attention to the neglected importance of India's exports and to certain irregularities discovered in the regulation of the country's export trade. The following are extracts from his speech:

Exports and Planning

"WHILE not belittling the work taken up by the authors of the 15-year Plan, I must here mention that they have not effectively brought home the necessity of maintaining and developing the export trade with the neighbouring countries and the countries facing the eastern and western waters of our land which we have developed without the support of a flag, an army, or a navy under grave risk and with unsurpassable enterprise.

East African Government Delegation

"An outstanding event of the year under review was the arrival of the Sayer-Paroo Delegation on behalf of the East African Government. Both Messrs. Paroo and Sayer unequivocally recognized this Chamber's importance. They held prolonged negotiations with our managing committee, which helped them on the four-points of their mission, namely, (1) Fixation of prices; (2) standardization of piecegoods varieties; (3) utilization of export quotas to the fullest extent and (4) regularity in supplies.

Margin of Profit

"You are aware that out of the 20 per cent. allowed to the shippers over ex-mill prices only 4 per cent. at the most remain with the shipper. The remaining 16 per cent. are spent by way of 7 per cent. for the mills, 3 per cent. for the cess, 3 per cent. for the middleman, and at least 3 per cent. as the shipping and storing charges. The fact that India has controlled export prices does finally prove that India does not want to exploit her neighbours who are dependent upon her for their supplies. India has refused to take advantage of her monopolistic position as a supplier of goods in order that a reservoir of goodwill in overseas market may be built and India may be able to continue to trade with those markets even after the war. However, this Chamber has repeatedly brought to the notice of the authorities that the margin available to exporters under price control is too small. On the other hand the 7 per cent. margin allowed to the mills seems like a deliberate piece of irony. How can India succeed in her objective of preserving the present markets which have come in her economic orbit if even the limited supplies of piecegoods allowed by the Government of India do not reach India's clientele abroad owing to the unwillingness on the part of our manufacturers to encourage and patronize India's export trade? There is no doubt that the whole price control scheme and the margin allowed to exporters as also the ensuring of supplies cries out for revision. The Chamber has been doing its best to impress this on the authorities.

Madagascar Complaints

"A serious complaint has been received by me from our members who deal with Madagascar as established shippers. Different authorities in Madagascar directly buy their requirements without the agency of the recognized shippers and the Ministry of War Transport in London knowingly or unknowingly eliminates them. This is serious, and I would urge on the Commerce Department to find out ways and means whereby the Madagascar shippers can maintain their legitimate trade which we have developed since the last century.

Aden and Sudan

"Owing to the promulgation of price control measures in the countries of the Middle East, especially Aden and Port Sudan, the Indian merchants over there who have settled in these territories generations ago have practically lost their trade. This deplorable state of affairs was brought to the notice of Mr. N. R. Pillai, Secretary of the Commerce Department. I understand that a considerable portion of injustice done to them has since been rectified as a result of the representation made by this Chamber."

Deputation to Commerce Member.—A deputation from the Chamber went to New Delhi recently and submitted a representation to the Commerce Member of the Government of India. The following are extracts from the representation:

Piecegoods Quota Allotment

"The Government of India having established a separate branch of the Commerce Department to regulate exports under the Chief Controller of Exports, the quota allotments are nowadays effected by this responsible official in New Delhi. As New Delhi is too far from Bombay the exporters find extraordinary difficulties in securing their allotments, which takes nothing less than a month. The new branch should be either moved to Bombay or a deputy of the Chief Controller of Exports might be stationed in Bombay. The next best arrangement would be for the Export Trade Controller to be empowered to allot quotas as hitherto.

Shipments through Unusual Channels

"We would at this juncture crave a little more indulgence in order to point out the position created by the Commerce Department in allowing direct quotas for countries like Madagascar, Iran and Turkey to their own Government representatives, instead of through usual trade channels.

"We beg to point out the recent incident of Madagascar shippers. The regular shippers to Madagascar who are being allotted export quotas against their clients' import quotas had to await their turn for freight to that country for six months at least while the French Committee of National Liberation who are being allotted a separate block of quotas for distribution to their selected shippers get practically the whole shipping space allotted during that period for Madagascar, thus leaving the regular shippers to their fate. This priority treatment at the hands of the Ministry of Shipping requires immediate change and the Indian shippers must be protected.

"Similarly, the practices of allotting quota to these Government agents or agencies must be stopped and regular and/or established shippers should be given a chance to re-establish their own trade relations direct with the importers at the other end, which ultimately is bound to benefit the Indian export trade.

Trade Missions

"Within the last three years, the East African Governments have sent at least four delegations to this country. Even the Middle East Supply Centre have recently stationed their representative in the person of Lt.-Col. Tom Smith. We propose that the Government of India ought to send out 'Goodwill' delegations to create closer relations between India and her customers. His Excellency the Governor of Kenya has welcomed this idea in the following words:—'I was much interested that the Africa and Overseas Chamber of Bombay has suggested that a goodwill mission should be sent to East Africa in the near future. This is the first information I have received on the subject and no doubt it is a matter that is primarily one for the Government of India to decide for themselves. But I would like to take this opportunity to say how important I consider it to be that our relations with the trading communities in India should be as happy as possible and I feel sure that the more personal contacts that can be made in that way the better it would be for all concerned."

Cotton Buyers' Association, Bombay

Annual Meeting.—The following are extracts from the speech delivered by Sir Joseph Kay, Kt., President of the Association, at its eighth annual general meeting held on the 13th March 1945:

"The working of the Indian Cotton Contract since its inception in 1943 has revealed several weaknesses, and it is held in certain quarters that the manner of preparation of the standards for surveys and appeals is one of them.

"It will be appreciated that no stability can be achieved in the trade unless a definite uniformity is preserved in the preparation of the standards from year to year. It is with the object of remedying this shortcoming that the Committee of the Association repeatedly supported the advisability of adopting the Universal Staple Standards until we have acquired in India the means and the experience of preparing our own standards in a correct and scientific way.

"A suggestion was made that standards should be subject to the approval of the Technological Laboratory at Matunga. This suggestion was opposed by the Committee on the score that a machine test is not a true indicator of staple values unless so many tests are made of the samples as to render the method physically impracticable.

"The Committee addressed during the year the East India Cotton Association suggesting various modifications to the structure of the contract, and the Board of the latter Association has accepted our suggestion that 'on call' cotton should be fixed not later than the 7th day of the tender period.

"A development within the Association during the year has been the formation of the Cotton Importers' Panel within the framework of the Association comprising all members interested in the importation of foreign cotton. The object of this panel is to discuss the multifarious problems which occasionally arise in the import business, and to adopt a uniform policy in connection therewith. I am glad to report that this panel has done useful work, and has been instrumental in solving many difficulties which have arisen during the year."

Textile Stores and Machinery Merchants' Association, Bombay

Annual Meeting.—The following are extracts from the speech delivered by Mr. R. M. Nanavati, President, at the annual general meeting of the Association held on 29th March 1945:—

"The Indian textile industry has been kept supplied till now with ample supplies of vital stores at controlled prices, and yet the machinery trade would not be taken into confidence by the industry. Now that foreign materials are available, I am afraid they might not support indigenous industries and patronize their production.

Difficulties of the Trade

"There is a cry for rapid industrialization of our country. Unless we run fast, it is said, we may be left behind in the race with other countries. But we will have to leap in the dark. We have no statistics of existing industries, for their war-time expansion. The authorities have turned down our request to furnish us with such statistics as they have in their possession. We do not know the extent to which finished products are being imported and will be imported in the near future. We know that an open general licence is available which gives general permission to import from the U.K. any of the consumer goods mentioned in the list published on 5th February 1945.

"There is no chance to increase production to meet the national demand. There are difficulties all round. There is shortage of coal at the source and scarcity of wagons for transport. Government have established rigid control on supply of raw materials and their releases take unduly long, and before finished products are ready for marketing, they will have to meet competition with imported materials. There is a heavy burden of taxation on industries and hence there is no initiative for new enterprise. If, however, we wish to start new industries, our difficulties start with the issue of capital and without assigning reasons and instead of assisting us, they would simply refuse to grant issue of capital. There is confusion in the mind of merchants as to what the authorities consider an essential war-time or post-war proposition.

Plea for Small Man

"Indian business magnates get Government's invitation to fly to U.K. and U.S.A. for discussion with representatives of British industrialists in connection mainly with capital goods required for post-war industrial development in India. It is natural that our leaders can get all that money can buy—power and capital goods—industrial plants, foreign experts, new workshops and machine tool factories, generators, turbines, looms and lathes. They can buy royalty, goodwill and support of foreign capitalists by combining with international industrial cartels. But what we wish is that they should not create monopolies by virtue of economic and political influence and strength. They should give the benefit of their knowledge and experience to the country and we hope that they will. They should live and let others live.

"The problem before the country is deconcentration of capital and broad distribution of profits. There should be equitable distribution of trade and industries. There should be equal opportunities to individual and private enterprise. Small merchants and manufacturers must have a safe room to exist."

Mr. Nanavati registered an emphatic protest against the refusal of Government to grant representation to the Association on the Millstores and Priority Assistance Committee.

Managing Committee 1945

President.—Mr. R. M. Nanavati (Messrs. Kantawala Nanavati & Co., Ltd.)

Vice-President: Mr. G. A. Kulkarni (Consolidated Mill Supplies Ltd.)

Honorary Secretary: Mr. N. J. Nair.

Hon. Treasurer: Mr. Chandulal V. Shah (Industrial Engineering Co.)

Members: Messrs. Popatlal Girdharlal (The Textile Works Limited), Manilal M. Patel (The Indian Shuttle Co., Ltd.), S. H. Bhagwati (Associate Textile Engineers), Dalli R. Parelwala, (H. M. Mehta & Co.), and J. R. Engineer (Textile Wood and Engineering Works). and B. C. Munshaw (Trustee of the Association, Asian Textile Engineering Corporation).

Trustees: Messrs. B.C. Munshaw and Bamonjee Hormusjee.

Calcutta Piecegoods Merchants' Association, Calcutta

Presentation of Address to Provincial Textile Controller.—The Association presented a farewell address on 21st March 1945 to Mr. T. Jones, Provincial Textile Controller, who was reported to be relinquishing office. The address points out that he had to labour under "various genuine hardships and under undue interference of higher authorities in your day-to-day work and your office would have been able to function more efficiently if adequate staff had been provided and possibilities of outside interference eliminated. We still hold that so long as the outside interference continues no Provincial Textile Controller, however efficient he may be, is likely to be able to carry on the control measures successfully and ensure a fair and equitable distribution of cloth to the public."

In the course of the speech delivered on the occasion by Mr. Babulal Shroff, Secretary of the Association, he observed :

"Times without number it has been emphasized by various bodies, including this Association, that group system to import cloth from surplus provinces may be introduced. It is regretted that the Government has not thought it fit to enforce this system as yet. It is also desirable that syndicates be formed of the quota-holders. Rationing of cloth in my opinion will not be possible and practicable. There are thousands of varieties and the introduction of rationing as suggested in certain quarters will give rise to many complications and is bound to aggravate the already existing scarcity of cloth in the Province.

"The remedies for imperfect cloth distribution must be sought in the following directions, viz:—

"(*a*) In ensuring larger and more regular supply of the required varieties of cloth and in ensuring the equitable distribution of same through the normal trade channels supervised and controlled by the recognised trade associations and the Government respectively.

"(*b*) Groups of importers should be formed to import goods from surplus zones and similarly syndicates should be formed of the quota holders.

"(*c*) Allotments should be made to the recognized associations of wholesalers, retailers and commission agents for distributing cloth to consumers.

"(*d*) No monopolised interests should be allowed to carry on trade.

"(*e*) Increased quota of supplies for Bengal should be pressed for.

"(*f*) All exports abroad or to other provinces from Bengal must be stopped.

"(*g*) Production of cloth and yarn by Indian mills generally and by Bengal mills in particular should be encouraged in every way possible."

TRADE LETTERS

(*From Our Special Correspondents*)

New Delhi

Planning Reconstruction

THE Government of India set up in 1941 machinery, known as the Reconstruction Committee, to deal with the various aspects of post-war reconstruction. In 1943, this machinery was overhauled and reconstituted into a Reconstruction Committee of the Executive Council, which now works as a separate Department under the Hon'ble Member for Planning and Development, Sir Ardeshir Dalal. The first report of the progress of the Department, which is just published, outlines the work that has been done by the Policy Committees set up to deal with specific problems in all spheres of public activity.

Organization of Scientific and Industrial Research

At the invitation of the Government of India, an unusually large number of scientists (including Sir C. V. Raman) and research workers have been visiting the capital recently and something definitely is in the air; I was told that I should have some very interesting news to report within the next few days by one of the members of the committee set up under the presidentship of Mr. N. R. Sarker, to consider ways and means of the early establishment of a central technological institute on the lines of the Massachusetts Institute of Technology. As pointed out in my last letter the ball was first set rolling by Professor A. V. Hill's visit and his subsequent report and suggestions.

Industrial Health

That the health of industrial workers has not been overlooked in the new scheme of things planned for the post-war years is evidenced by the fact that a committee has been appointed to deal with all the problems affecting the health of the industrial population such as administration of health services, occupational diseases, accidents, environmental hygiene in the factory, housing, nutrition, welfare work, sickness and maternity benefits, planned regional zoning of industry, drug and drink habits and industrial health research. To serve on the Committee are: Lt.-General J. B. Hance, D.G. of I.M.S., Sir Frederick James, Mr. N. M. Joshi, Dr. B. C. Roy, Mr. B. Shiva Rao, Sir Shri Ram, etc.

A New F.R.S.

Very little has been heard in the press of the recent election to the Fellowship of the Royal Society of Professor P. C. Mahalanobis, Head and Founder of the Indian Statistical Institute at Calcutta. Professor Mahalanobis has made, during the past 30 years, valuable contributions to the science of statistics through his researches. The value of the application of statistical methods in textile research and industry is being gradually appreciated by our industrialists; there is at least one large mill in Ahmedabad where a statistician has been employed as a full-time member of the staff. I hear a large mill combine in Delhi also contemplates setting up a statistical department. Professor Mahalanobis' election brings the total number of living Indian Fellows to eight.

Ahmedabad

I RELIABLY understand that the Government of India is planning nation-wide rationing of cloth to check black markets that still persist all over the country on a large scale. Government's repeated warnings to the trade and industry have been practically unheeded, and Government intend to undertake both production and distribution of cloth if black markets are not appreciably checked within three months. Government seems to be desperately anxious to stamp out black markets in cloth, because, with the approaching end of the war in Europe, Indian cloth will be facing extraordinary demand.

Sir Akbar Hydari has no doubt secured relief by way of reduction by 200 million yards of cloth each in supplies to Defence Services and in the quota of export in 1946, but Indian cloth which is already being smuggled outside the country is likely to be increasingly smuggled with the cessation of hostilities in Europe till the countries which have been devastated by war are rehabilitated and resume normal production. The present acute shortage of cloth in deficit provinces is being ascribed to smuggling into the adjoining foreign countries, which will be accelerated immediately after the war in Europe and the Pacific cease. It is not so easy to check smuggling as black marketing. Government will have to devise a very costly and elaborate machinery to deal with smuggling. The best course for Government is to control both production and distribution of cloth by a system of rationing on the lines of rationing of foodgrains which has proved so eminently successful.

Cloth rationing like foodgrains rationing, will relieve shortage and counteract black marketing and smuggling. Of course, Government will have to devise all possible measures to step up production which is being affected by coal shortage and other difficulties. In Ahmedabad alone the production of cloth has already been affected to the extent of 48 million yards owing to closure of mills due to short supply and/or bad quality of coal. On an average 130 tons of coal are required for 100 tons of coal required in normal times owing to the mixture of a very large proportion of stone, slate and other non-combustible materials. The attention of Government was drawn to these difficulties at the recent meeting of the Textile Control Board, and it is hoped that the Government will remove them soon. The Textile Control Board also agreed to call upon mills to utilize 90 per cent. of their available loom capacity for what is described as "utility cloth" as against unwanted but remunerative cloth. If mills do not manufacture these varieties which include *dhotis*, *saris*, longcloth, etc., Government will order them to produce standard cloth which the people will have to purchase in the absence of other varieties. The increased purchasing power of large sections of the people brought about by war earnings has created an insatiable demand for finer varieties which are the most fruitful source of black markets. Government is out to control the very root of black markets by checking the production of different varieties of cloth. Subsequently, if necessary, Government will control the entire distribution machinery if it does not improve. The wholesale merchants have been brought under control by freezing their stocks and delivering them to permit-holders. Government will similarly bring under control retail merchants who do not play their part. Government is said to be even prepared to create its own machinery of distribution to displace the existing machinery. Both trade and industry have become alert in Ahmedabad in view of the determination of Government as disclosed at the latest meeting of the Textile Control Board, and are busy setting their house in order.

General Strike Averted

A general strike which was contemplated by the Textile Labour Association on the question of bonus for 1944 has been averted by the intervention of the Government of Bombay who has ordered reference of the dispute to the arbitration of the Industrial Court in exercise of the powers conferred by clause (2) of section 49A of the Bombay Industrial Disputes Act, 1938. The Ahmedabad Millowners' Association was not prepared to accept the demand of the Labour Association for reference of this and other disputes to arbitration. It is said that the Millowners' Association is prepared to destroy the arbitration machinery which Mr. Gandhi created in Ahmedabad, and which worked for nearly two decades to the great advantage of the industry. The millowners contend that arbitrators, official as well as unofficial, are always favourably inclined towards labour, and add to the burdens of the industry and weaken its competitive capacity in comparison with other centres. Millowners, however, forget that the advantages of industrial peace, which they enjoy, far outweigh any additional burdens which they may have to bear as the result of the awards of the arbitrators who never overlook the interests of the industry. While other centres are distracted by protracted strikes, we in Ahmedabad have hardly seen a strike for nearly two decades. This is not a small advantage to an industry, and Ahmedabad mill agents should not lightly disregard its value. Government interference has saved them from a strike during the continuance of the war, but after the end of the war, they should not precipitate a strike, which will do them immense harm.

All-India Mazdoor Sevak Sangh

Mr. Gulzari Lal Nanda, Secretary of the local Labour Association, has revived the All-India Mazdoor Sevak Sangh, which was formed in 1938 by prominent Congress leaders like Mr. Vallabhbhai Patel and others to apply Mr. Gandhi's principle of arbitration for the settlement of industrial disputes on an all-India scale. Branches of this body will be formed in other industrial centres of the country, and workers will be trained in Ahmedabad to conduct those branches. It is the aim of Mr. Gandhi to eliminate strikes from the field of industries as it is his aim to eliminate wars from the field of politics. Both are revolutionary changes for which humanity is ill-prepared, but as a prophet he must preach his new gospel and prepare the world for it during his lifetime. His followers who have imbibed his principles must try to work them out in their own way. The All-India Mazdoor Sevak Sangh will do all over the country what the Textile Labour Association has done in Ahmedabad.

The Ahmedabad Millowners' Association has decided to open an Institute of Industrial Research in collaboration with Government who have permitted the mills to be exempted from income-tax on whatever contribution they make towards research. They will thus collect about Rs. 60,00,000 which will be devoted to starting a research institute which was so badly needed in a centre like Ahmedabad. The Ahmedabad industry has gained immensely during the war, and if it wants to compete successfully with foreign countries after the war, it must be abreast of the times. After the last war it made rapid progress in manufacturing processes which stood it in good stead during the present war. This progress must be accelerated after the end of the present war.

Indore

THE main topic of the day is the distribution of cloth. Indore, although a big manufacturing centre, happens to be in the Rajputana Deficit Zone, the whole of which is put under the control of the Chief Commissioner, Ajmer, who is the co-ordinating authority for distribution for this zone. According to the proposed arrangements this zone is to get its finer varieties from Bombay and Ahmedabad to the extent of 6,900 bales per month and, with the addition of local manufacture, it will make up the total quantity available to the extent of 12 yds. per head per year; the rest of the local manufacture is to be allowed to be sent outside the zone. These arrangements, however, are not yet finalized and in the meanwhile the quota-holders are required not to dispose of the bales which they get from the local mills until receipt of the orders of the local Textile Commissioner in this connection. Naturally this is causing great inconvenience to the trade.

Coal Position

Though the position in regard to supply of coal in other centres in Central India and Rajputana appears to be still unsatisfactory, in the local mills it has improved since the month of March. Prior to that the supply was both inadequate and irregular, with the result that there were frequent stoppages to the extent of more than two months during 1944 and about a fortnight during January and February 1945. The recent visit of Mr. J. B. Greaves, C.B.E., Chief Controller of Raw Materials and Stores, Office of the Textile Commissioner, Bombay, it seems, has been responsible for the improved situation.

There was considerable unrest among labour ranks in regard to the demand for retaining allowance for the period of the above stoppage in the local mills and, after conciliation proceedings under the Trade Disputes Act, it was decided that, pending the decision of this question at other places, a tentative amount at the rate of Rs. 17 per head for all the periods of stoppages upto and including that for January 1945 may be paid; the local mills have since made the payments accordingly.

Bonus Dispute

Another question under conciliation is in regard to the demand for bonus. At present a bonus equivalent to 1½ months' basic wages is offered while labour clamours for 3 months' basic wages.

The cotton mills in Central India have had rather frequent fires recently. There were two fires in Hira Mills, Ujjain, within a few days. The Shree Sajjan Mills, Ratlam, has had a big fire destroying a huge quantity of cotton and the Rajkumar Mills had a small fire in their waste godown, in the other cases considerable quantities of cotton were destroyed.

The Nandlal Bhandari Mills, Indore, had to face a close-down for about a month on account of a breakdown in the engine. The Kalyanmal Mills also had a similar close-down for a few days. Both are now working normally.

The working of the mills generally continues to be satisfactory. The mills are now to face another important problem of rationalization and standardization of production with a view to increasing output and it has to be seen how the measures recommended by the Textile Control Board take effect.

Cawnpore

LAST month we had several weighty pronouncements from the chairmen of different chambers of commerce, reviewing the industrial and commercial situation in the province. All of them gave exhaustive surveys of the progress made by the several industries, both large scale and cottage ones, specially as a result of war conditions. Over 2½ lakhs of persons are employed in large-scale industries alone, and if all those engaged in industrial pursuits are to be taken into account, it was nearly 12 per cent. of the population of the province. This may not be a big proportion, but in a province like the U.P. which has been considered essentially an agricultural province for years past, it is encouraging that the industrial population is growing.

Department of Industries

The chief industries of the province at present are textiles, sugar, leather, and glass manufacturing. There also exist paper-making, oil-crushing, hosiery, chemicals, steel, soap and a number of small-scale and cottage industries. As revealed by the recent Administration Report of the Industries Department, war supplies continued to be the most important activity of these institutions—a very large number of blankets, locks, scissors, forks, folding *charpoys*, bullock carts, parachute tape, etc., of an approximate value of half a crore of rupees were supplied to the Government of India during the year. Over 1,000 war technicians received training at the various Government technical schools. The research and technical organizations of the Department gave advice to the industrialists and conducted researches on rubber substitutes, vegetable oils, vegetable casein, vegetable jelly, cylinder oil and other articles.

Family Budget and Wage Census

A family budget inquiry has been started by the Government of the U.P. Department of Labour, for assessing the cost of living index and other details of the working class population in the province. A period of 15 months has been fixed for this inquiry and the work is being carried out by a special staff consisting of one assistant labour officer, one senior investigator, and five investigators. Family budgets of over 3,500 workers will be prepared. The family budget of a worker is divided into three parts—personal details, professional details and the indebtedness of the worker.

The wage census which was being conducted under instructions from the Labour Investigation Committee, Government of India, for the province of the U.P. concluded its work last week. The inquiry, it may be remembered, was undertaken in September 1944, and covers 15 cotton mills, 2 woollen and two jute mills. The report of the inquiry will shortly be published by the Government. The object of such an inquiry, it is learnt, is to regulate the wages of the workers and stabilize their standard of living.

Crisis in Cloth Market

The cloth situation in the province has very much deteriorated and complaints pour in from every district. Although the Provincial Government has appointed a Textile Commissioner (for the province) and he has been endeavouring his best, the position has not improved. A two-day conference of U.P. cloth dealers was held at Cawnpore on the 4th and 5th of April, which was attended by over 177 delegates from the 40 districts of the province, to consider the acute situation created in the province by the shortage of clothing. While on the one hand, the Government assert that the province was receiving sufficient quantities of cloth, (which according to it was not reaching the consumers but finding its way to the black market), the dealers by facts and figures show that they are not getting enough cloth to go round. The President of the conference, explaining the situation, mentioned two points as the cause of all the trouble, viz., (1) inadequate quota for U.P. and specially Cawnpore, and (2) the defective machinery of the distributing system. He explained that while the pre-war import of Cawnpore (out of the total figure for the province of U.P.) was 60 per cent., the new quota allotment was only 8 per cent. It was also stressed that while in 1939 out of 42,66,000 bales of cloth produced in the country, the province was consuming 585,000 bales, or roughly one-seventh of the total cloth production of the country, or 15.9 yards *per capita*, the present total production of cloth for civilian consumption in the country being 3,531,000 bales, the province was entitled to get 42,000 bales, but it has been allotted only 31,000 bales under the present distribution scheme. On the basis of the new allocation, the province is to get only 3,100 bales from Bombay and 3,410 bales from Ahmedabad, instead of 7,000 bales from each of these centres which it was entitled to get under the old scheme. With effect from 1st April the production of Cawnpore mills is also to be controlled. Out of the city's monthly output of 16,000 bales, the province will withhold 10,000 bales for internal consumption, while 5,000 bales will be exported to other provinces.

Sir William Ibbotson, Adviser to the Governor (Supplies), sounded a stern warning that "if the Kapra Committees were not honest in their dealings, Government would have to set up their own agency for the distribution of cloth on equitable basis. "We are little intimidated," he added, "by threats. The U.P. Kapra Committee should have been prosecuted under the Defence of India Rules for creating panic." The Adviser emphasized the firm determination of the Government to eliminate black-marketing.

South India

Cloth Position in Mysore

MR. E. G. Ganapathi Aiyar, Controller of Civil Supplies, Mysore, stated at a Press conference in Bangalore that Mysore State would be getting regular supply of cotton goods on the ten yards *per capita* basis and, as such, there need not be any apprehension in the minds of the public of any possible cloth scarcity or famine. He also announced that licences had been issued just now to numerous retail dealers all over the State, who would hereafter be assured of regular supply on a certain scale. As for *dhotis* for which there was at present some heavy demand, arrangements had been made to issue coupons on the basis of food ration cards to ensure that there was no black-marketing and that there would be even distribution.

Referring to the All-India Cloth Distribution Scheme, Mr. Ganapathi Aiyar said that Mysore was a deficiency province, that, in view of the climatic conditions in the State, the *per capita* quota of 10 yards was inadequate and that it was expected that their representation for extra supplies would be favourably considered by the Textile Commissioner, Bombay. Appealing for co-operation from the public in the matter of limiting their purchase to the minimum necessary, Mr. Ganapathi Aiyar stated that in Mysore, they had the fullest co-operation of the dealers, wholesale and retail, in the matter of distribution. Handloom production in the State had increased. It should, however, be remembered that there was not a single mill in the State which produced fine cloth like mull, longcloth, etc. For that matter, in the whole of India, only 6¼ per cent. of the total quantity of cloth produced belonged to the fine variety. For normal requirements, local mill production was enough.

New Arrangement for Distribution of Yarn

Mr. S. Venkateswaran, I.C.S., Provincial Textile Commissioner, Madras, in reply to a memorandum submitted by the Madras Provincial Handloom Weavers' Association, Nidubrolu, has stated that he has issued instructions to the Textile Control Officers, requesting them to furnish, on application to the Madras Provincial Handloom Weavers' Association or any local weavers' association, information regarding the quantity of yarn by counts received in the district during any month.

The control officers have been further requested to form advisory committees on lines indicated in his scheme for distribution of yarn in every district weavers' centre to help them in the preparation of consumers' lists and distribution of yarn. They are also asked to issue ration cards to weavers provided the advisory committees have agreed to the ration card system.

The members of weavers' co-operative societies, who are not getting their supplies of yarn from the societies, should be linked with retailers just as weavers, who are non-members of weavers' co-operative societies, obtaining certificates from the societies to the effect that these weavers are not getting their supplies of yarn from the societies.

The weavers, who have migrated from famine areas to the neighbouring districts, when settled there with their looms, should be treated as permanent residents of the respective districts and included in the consumers' lists for supply of yarn under the scheme.

Benares Cloth-weaving Industry in Hyderabad

Handloom weaving was one of the old and important industries of India. The incomparable Dacca muslins and the Benares silks once made India famous throughout the world. The advent of machine-made cloth, however, has done a great deal of harm to these industries and is even threatening them with complete extinction. The only way to save these industries is, obviously, by introducing such improvements as may place them beyond the bounds of competition from machine-made cloth. There are a number of varieties in Benares cloth, such as "kheva," "georgette pote," "jamadani," "alfi," etc., which can be improved considerably. With a view to effecting improvements in the handloom weaving industry generally to enable it to compete favourably with machine-made cloth, and to introducing Benares-cloth weaving as a lucrative industry in the Nizam's Dominions, the Local Government have sanctioned a scheme of the Department of Technical and Vocational Education. It aims at training selected students of the Central School of Arts and Crafts in Benares cloth weaving. The services of an expert are being obtained to supervise the weaving section of the Central School of Arts and Crafts. Those selected for training will be given scholarships of Rs. 15 per mensem each during their three years' training, at the end of which they will have gained sufficient knowledge to work for its further development.

Textile Industry in Pudukottah

While presenting the budget estimates for the Pudukottah State for 1945, the First Councillor referred to the condition of the textile industry in the State. The Minakshi Mills at Usilampatti are supplying most of the yarn required in the State. Acquisition proceedings for the Pudukottal Textiles Ltd., have been almost completed and the Darbar hope that these ventures will soon develop into big factories and command a large percentage of textile manufacture in South India.

Textile Production in Mysore

The total production of cotton piecegoods during August 1944 in Mysore State was 44,61,267 yards as against 34,25,391 yards in the previous month. The total quantity of yarn spun in mills in August 1944 was 22,39,519 lbs. as against 14,49,580 lbs. in the previous month.

Indian Mill Finance

Working of Textile Companies

Swadeshi Cotton Mills Co., Ltd., Cawnpore

(Managing Director: E. J. W. Plummer)

After providing a bonus to employees, the working of the company for the year ended 31st December, 1944 shows a profit of Rs. 1,57,01,756-11-5, out of which a sum of Rs. 1,17,63,000 has been set aside for estimated taxation, Rs. 27,42,000 has been transferred to excess profits tax deposit fund on account of the estimated deposit payable under section 10 of the Finance Act 1942, and Rs. 6,00,000 for depreciation. This leaves a balance of Rs. 5,96,756-11-5 to which has to be added the balance brought forward from 1943, viz., Rs. 13,82,879-4-7, making a total sum available of Rs. 19,79,636, which the Directors propose to deal with as follows:—Dividend on 17,500 preference shares 6 per cent., free of income-tax Rs. 1,05,000; dividend on 17,500 ordinary shares 60 per cent. free of income-tax Rs. 10,50,000 and to be carried forward Rs. 8,24,636.

Trichinopoly Mills Ltd., Trichinopoly

(Agents : Mooljee Ramjee and Sons)

The profit earned by the company during the year ended 31st December 1944 is comparatively less than that of the previous year due to the drastic reductions in the prices of yarn and an increase in the costs of manufacture.

During the year the workers and staff were given dearness allowance in proportion to the rise in the price of commodities of foodstuff as indicated by the index figures from time to time, besides 25 per cent. of their annual earnings as bonus on the occasion of *Deepavali*.

The net profit for the year, after providing for all expenses and writing off depreciation on fixed assets, is Rs. 7,41,664-4-2. Adding the balance of last year's profit, viz., Rs. 47,939-1-4, the amount standing to the credit of profit and loss account is Rs. 7,89,603-5-6. The directors propose to appropriate same as follows:—To provide for excess profits tax Rs. 4,18,000; to provide for excess profits tax deposit Rs. 1,24,200; to provide for income-tax Rs. 1,37,200; to appropriate for dividend equalization fund Rs. 43,318-2; to declare a tax-free dividend of 10 per cent. for the year Rs. 62,206 and to carry forward the balance of Rs. 4,679-3-6 to next year.

Century Spinning and Manufacturing Co., Ltd., Bombay

(Agents: Chunilal V. Mehta & Co.)

The working of the company for the year ending 31st December 1944 shows that after transferring Rs. 5,00,000 to engine and machinery deterioration fund, Rs. 1,21,000 to repairs fund and providing Rs. 93,83,000 for taxation and Rs. 20,67,000 for the compulsory E.P.T. deposit, there is a surplus of Rs. 7,72,131-2-11 out of which the Directors have paid, on 28th September 1944, an *ad-interim* dividend of Rs. 12 per share free of income-tax absorbing Rs. 3,28,284. There now remains a balance of Rs. 4,43,847-2-11 which together with the amount of Rs. 16,207-9-2 brought forward from last year makes a total of Rs. 4,60,054-12-1 which they recommend should be appropriated in the following manner:—Payment of a final dividend at the rate of Rs. 16 per share (making Rs. 28 per share for the whole year) free of income-tax absorbing Rs. 4,37,712, balance to be carried forward to next year's account Rs. 22,342-12-1.

As at 31st December 1944 the Century Mill and other buildings, stocks of cotton, yarn, cloth, stores, machinery, sundries, accessories, etc., have been insured for Rs. 2,20,35,000 and the Zenith Mill and other buildings, stocks of cotton, yarn, cloth, stores, machinery, sundries, accessories, etc., have been insured for Rs. 1,95,43,000.

Their buildings, plant and machinery and stocks have been insured for Rs. 2,71,90,000 under the Government War Risks (Factories and Goods) Insurance Ordinances. The profits and fixed charges have been insured to cover loss of profits for a period of indemnity of 36 months at Rs. 4,54,27,500.

A sum of approximately Rs. 50,000 was spent on the purchase of new machinery and the replacement of certain old machinery. A sum of approximately Rs. 26,000 was spent on new buildings.

Vasanta Mills Ltd., Singanallur

(Agents: R. K. Shanmukham Chetty & Bros.)

After payment of all expenses including a sum of Rs. 81,079 paid as bonus to the employees and after providing Rs. 1,30,783 for depreciation on assets, the working of the company for the year ending 31st December 1944 has resulted in a profit of Rs. 15,46,304 to which is added the balance of last year of Rs. 5,236, making a total of Rs. 15,51,540 which the Directors recommend to be appropriated as under:—Provision for income and excess profit taxes Rs. 11,62,000; to transfer for reserve fund from which the deposit under section 10 of the Finance Act, will be paid Rs. 2,50,000; preference share dividend paid Rs. 28,500; dividend at 15 per cent. free of tax on the ordinary shares Rs. 1,05,000 and to be carried to next year's account Rs. 6,040.

The company's buildings and machinery have been insured against accident by fire for their replacement value and the stocks of cotton, yarn and cloth have been insured against fire and war risk. The company's legal liability to workmen has also been covered by workmen's compensation insurance.

Apollo Mills Ltd., Bombay

(Agents: The Rajputana Textiles (Agencies) Ltd.)

After meeting all working expenses, including dear food allowance, providing for the bonus to the operatives of two months' pay on their average earnings in 1944 (payable in 1945) and setting aside Rs. 39,00,000 for estimated tax liability on the profits of 1944, the result of last year's working is a profit of Rs. 14,14,295. Out of this amount the Directors have appropriated for depreciation Rs. 4,00,000, leaving a balance for the year of Rs. 10,14,295, to which must be added the balance brought forward from 1943 Rs. 10,04,799, making a total sum of Rs. 20,19,094 which the Directors recommend should be appropriated in the following manner: To payment of dividend for the year ended 31st December 1944 at 4 annas per share free of income-tax, absorbing Rs. 6,25,000 and balance carried forward Rs. 13,94,094.

The mill machinery, buildings and stocks are insured for Rs. 1,75,93,750 and standing charges are insured for Rs. 15,00,000 covering a period of two years.

Tata Mills Ltd., Bombay

(Agents: Tata Sons Ltd.)

The profit of the company for the year ended 31st December 1944 after making a provision of Rs. 4,00,000 for depreciation and of Rs. 39,50,000 for taxation, amounts to Rs. 12,16,331. Adding thereto the balance brought forward from the accounts of the previous year, viz., Rs. 31,526 the total comes to Rs. 12,47,857. From this sum the Directors have carried to reserve fund Rs. 7,50,000; redeemable preference shares redemption fund Rs. 2,00,000 leaving a balance of Rs. 2,97,857. The Directors recommend the appropriation of this sum as follows:—Payment of dividends for the year ended 31st December 1944:—(*a*) dividend at Re. 1 per share on redeemable preference shares (subject to deduction of income-tax) Rs. 60,000; (*b*) dividend at Re. 1-8 per share, free of income-tax, on ordinary shares Rs. 1,95,265, and to be carried forward to the accounts of the next year Rs. 42,592.

The Directors report that there was a strike of the operatives at the mill which began on 6th December 1944 and continued till 31st January 1945. The profits were adversely affected by the strike, apart from the fact that there was a general decline in the profits of the textile industry during the year.

The company's buildings, machinery and stocks have been insured for Rs. 2,17,49,831. Profits and standing charges have been insured for a sum of Rs. 60,00,000 per annum, indemnity being payable for 24 months. Insurance has also been taken under the War Risks (Factories) Insurance Ordinance for Rs. 77,22,504. Under the War Risks (Goods) Insurance Ordinance all insurable stocks were kept fully covered throughout the year.

Svadeshi Mills Co., Ltd., Bombay

(Agents: Tata Sons Ltd.)

The profit of the company for the year ended 31st December 1944, after making a provision of Rs. 4,00,000 for depreciation and of Rs. 61,00,000 for taxation, amounts to Rs. 17,10,228. Adding thereto the balance brought forward from the accounts of the previous year, viz., Rs. 55,230, the total comes to Rs. 17,65,458. From this sum the Directors have carried to the reserve fund Rs. 9,90,000, leaving a balance of Rs. 7,75,458. The Directors recommend the appropriation of this sum as follows:—Payment of dividends and bonus, both free of income-tax, for the year ended 31st December 1944:—(*a*) Dividend at Rs. 5 per share on preference shares Rs. 75,000; (*b*) dividend at Rs. 16 and bonus at Rs. 6 per share, making a total of Rs. 22 per share, on ordinary shares Rs. 6,60,000 and to be carried forward to the accounts of the next year Rs. 40,458.

The Directors regret that as a result of the explosions that occurred in the Bombay Dock area on the 14th April 1944 the Company's godown at Masjid Siding Street was almost completely destroyed. A sum of Rs. 26,659 was received from the Government against the claim for the loss. Of the contents of the godown at the time of the explosions, 53 bales of cloth were found missing. The claim for the value of these bales is still pending.

The company's mills and factories with their contents and the stocks of yarn and cloth have been insured for Rs. 2,35,65,000. Profits and standing charges have been insured for a sum of Rs. 70,00,000 per annum, indemnity being payable for 24 months. Insurance has also been taken under the War Risks (Factories) Insurance Ordinance for Rs. 1,06,93,000. Under the War Risks (Goods) Insurance Ordinance all insurable stocks were kept fully covered throughout the year.

Sitaram Spinning and Weaving Mills Ltd., Trichur

(Agents: T. R. Anantharama Iyer & Bros. Ltd.)

The working of the company for the year ended 31st Karkadagom, 1119 shows a net profit of Rs. 11,46,996-10-10 out of which a sum of Rs. 1,18,217-10-3 has been provided for depreciation and a sum of Rs. 31,703-0-10 has been paid as *interim* bonus to the staff and operatives, leaving a balance of Rs. 9,97,075-15-9.

With the sum of Rs. 5,886-11-0 brought forward from previous year's account, the total funds available for allocation amount to Rs. 10,02,962-10-9 out of which a sum of Rs. 1,29,950 was utilized for paying an *interim* dividend of Rs. 10 per ordinary share leaving a balance of Rs. 8,73,012-10-9, which the Directors recommend to appropriate as follows:—To pay to the Sitaramaswamy Temple Rs. 5,974; to pay a dividend of 6 per cent. on the preference shares, income-tax free Rs. 9-14-7; to pay a final dividend of Rs. 10 per ordinary share free of Cochin income-tax, to make up a total dividend of Rs. 20 per ordinary share, i.e., 33⅓ per cent. for the year 1119 Rs. 1,29,950; to pay a bonus of Re. 1 per share to the preference shareholders Rs. 11; to pay to the staff and operatives a bonus of one month's average basic earnings over and above the bonus of two months' average basic earnings already given Rs. 25,000; to pay income-tax and excess profits tax Rs. 6,25,000; for dividend equalization fund Rs. 25,000; for reserve fund Rs. 50,000; for gratuity fund Rs. 10,000 and to be carried forward to next account Rs. 2,067-12-2.

The mill buildings, machinery, plant and other properties of the company are insured for about Rs. 21 lakhs against fire and war risks.

NEWS OF THE MONTH

Indian

Working Class Cost of Living Index for Bombay.—During February 1945, the working class cost of living index number for Bombay, with the average prices for the year ended June 1934 equal to 100, was 229. This was the same as in the preceding month. The index number for the food articles remained stationary at 254.

Bombay Agents for Dhakeshwari Cotton Mills.—Apex Traders, Advani Chambers, Sir Pherozeshah Mehta Road, Bombay, have been appointed purchasing agents for the Dhakeshwari Cotton Mills Ltd., Dacca.

Bengal Art-silk Millowners' Association : Executive Committee.—A new association, by the name of " Bengal Art-Silk Millowners' Association " has been formed in Calcutta having its office at " Bagati House," 4, Ganesh Chandra Avenue, Calcutta, with an Executive Committee consisting of the following members: — Messrs. D. N. Mookherjee, President; A. C. Ariff, Vice-President; K. C. Biswas, Honorary Secretary and Treasurer, and E. M. Yahyabhai and Hansraj, members.

Ahmedabad Textile Dispute Referred to the Industrial Court.—The Bombay Government have referred to the Industrial Court the dispute between the Millowners' Association, Ahmedabad, and the Textile Labour Association, Ahmedabad, over the bonus for the year 1944.

Indian Red Cross Society : Mr. Ramnarayan Chellaram's Donation for Dispensary. —The Executive Committee of the Indian Red Cross Society (Mysore State Branch) at their meeting held at Bangalore on the 31st March 1945, Rajamantrapravina Mr. H. B. Gundappa Gowda, Minister for Public Health, presiding, thankfully accepted a cheque for Rs. 15,000 sent by Mr. Ramnarayan Chellaram and his nephew Mr. Bhagwandas Hundraj for the construction of a dispensary in the compound of the Seth Chellaram Kishindas Maternity Home to be named after Mr. Ramnarayan's brother, the late Seth Hundraj Chellaram.

Textile Calendar

MARCH

30th, Friday :
Bombay Textile and Engineering Association, Forty-fifth Annual General Meeting.

31st, Saturday :
Ahmedabad Millowners' Association, Annual General Meeting.

APRIL

3rd, Tuesday :
Lecture by Mr. Dorab F. Kapadia, M.Sc., Tech. (Manc.), on "Researches in Planning of Post-war Spinning Layout in Medium and Fine Counts " under auspices of Bombay Textile and Engineering Association, at B.E.S.T. Conference Hall, Bombay.

11th, Wednesday :
First Meeting of the Sarker Committee appointed to establish a Central Technological Institute for India, New Delhi.

12th, Thursday :
Third All-India Cotton Crop Forecast Estimates.

20th, Friday :
Textile Association (India) Monthly Social, Mr. Sorab Dinshaw reading his prize essay on the " Organization and Management of a Model Cotton Spinning Mill," Podar College of Commerce, Matunga, Bombay.

21st and 22nd, Saturday and Sunday :
First Session of the All-India Hand-Printers' and Hand-Dyers' Federation, Bombay.

25th, Wednesday :
Association of Indian Industries, Bombay, Third Quarterly General Meeting.

Holidays with Pay for Factory Workers. —The Central Assembly at New Delhi has passed Dr. Ambedkar's Bill to provide for holidays with pay for factory workers. Dr. Ambedkar accepted an amendment of Mr. Anathasayanam Ayyangar which raised the number of holidays with pay from 7 to 10 days in a year.

Tata Institute of Social Sciences, Bombay : Fifth Convocation.—The fifth convocation of the Tata Institute of Social Sciences, Bombay, was held in the compound of the Nagpada Neighbourhood House on 14th April 1945, Sir S. D. Saklatvala, Kt., Chairman of the Board of Trustees, presiding. Sir Ramalinga Reddy, Kt., D.Litt. (Hons.), M.L.C., Vice-Chancellor, Andhra University, delivered the Convocation address.

Navsari Cotton Seeds Frozen.—The Commissioner of Agriculture, Baroda State, has declared frozen 25 per cent. of the seed ginned in Navsari, whether owned by a gin owner as a buyer or being ginned by him for other buyers. The seed will be sold to the cotton officer, Navsari, directly or on his order at the local control price.

Indian Jute Acreage in 1944.—The total acreage for jute in 1944 was 2,059,555 acres, and the revised yield is estimated at 5,493,725 bales of 400 lbs. each, according to the consolidated supplementary review of the jute crop issued by the Department of Agriculture, Bengal. The foregoing figures relate to Bengal, Cooch Behar and Tripura States, Bihar, Orissa and Assam.

Cotton Consumption by Indian Mills.—The consumption of Indian cotton by the domestic mill industry during December 1944 amounts to 364,524 bales as against 368,491 bales for the corresponding month of 1943. The consumption for the first quarter of the current cotton year is stated to be 1,399,619 bales as compared with 1,437,110 bales for the quarter ended December 1943.

Labour Health Scheme.—A fundamental change in the organization of medical service, and the integration of maternity benefit and workmen's compensation in the health insurance scheme, are the chief modifications in Prof. Adarkar's report, suggested by Mr. M. Stack and Mr. R. Rao, who have been deputed by the International Labour Office to examine and advise the Government of India on the report. The scheme is an elaboration on the proposals made by Prof. Adarkar.

Indian Cotton for U.S.—The War Production Board at Washington announced that authorization of the import of 5,000 bales of raw cotton from India is being considered and that it now is prepared to authorize imports of wool originating in Tibet and Afghanistan. The Board said that cotton is reported as available for immediate shipment from Calcutta. It is proposed to authorize imports of cotton primarily to those importers who made direct imports of raw cotton from India during the base period of 1937 to 1941 inclusive. Authorizations will be limited to stocks now available for shipment from Calcutta.

Technical Study Abroad : Selection Board Appointed.—The Government of India have appointed the following Selection Board to make the final selection of students to be sent abroad for advanced courses in technical and agricultural subjects directly related to the various plans for post-war development, says a Press Note:—

Sir Maurice Gwyer (*Chairman*); Dr. John Sargent, Education Adviser to the Government of India; Dr. Sir S. S. Bhatnagar; Sir Shafaat Ahmed Khan and Captain Sardar Nau Nihal Singh.

An expert in each technical subject for which students are to be selected will be co-opted on the board.

The selection of students to be sent abroad, including those nominated by Provincial Governments, is expected to be completed by the end of May.

The Task Ahead

Controls should be regarded much as we regard drugs. They are useful to serve a special purpose, but heaven help you if you establish what the doctors call 'toleration' for them !

—*Lord Winster.*

Collecting Cotton Reels for the Army.—Housewives and working women all over India are collecting cotton reels for the Army in response to an S.O.S. from the Indian Signal Corps.

South-East Asia Command wants cotton reels as a substitute for porcelain insulators. Cotton reels prevent wear and tear on "treed" cables. With a couple of turns over reels pinned to tree trunks, the cables "ride" easily when the tree sways and thus help to maintain vital communications.

India is making porcelain insulators, but there is a shortage. Housewives have, therefore, sent their cotton reels to the Army, and many vital lines through the jungle, strung as a quick makeshift from tree to tree, are supported on the homely bobbins.

Cotton reels may be forwarded to local Station Staff Officers.

No I.C.I. Ammonia Plant for India : Reports Denied.—Reports have appeared in the Press that the I.C.I. purchased before the war a plant of German make having a capacity to manufacture 350,000 tons of sulphate of ammonia, which was erected in Manchester but was found unsatisfactory and is now lying idle and that the recommendations of the Technical Mission appointed to advise on the production of artificial fertilizers in India are designed to " dump " that plant on this country, says a Press Note.

The Government of India wish to make it clear that these reports are pure fabrications. The I.C.I. owns no such plant. In fact, there is no synthetic ammonia and sulphate plant in the Manchester area. The one or two small plants which the I.C.I. owns, besides its major plant at Billingham, are not of German make and the company has no intention of disposing of them.

Settlement of Labour Disputes in Mysore.—The Government of Mysore consider that the existing legislative enactments and rules relating to labour should be comprehensively reviewed, in all their bearings, by a committee on which the interests concerned are properly represented, with the object of securing a reconciliation of the conflicting provisions which have come to notice, and of providing a coherent body of labour laws which, in actual application, would ensure a prompt and effective settlement of industrial disputes. They have appointed a Committee for the purpose with *Rajadharmaprasakta* Mr. T. Singaravelu Mudaliar, B.A., B.L., Retired Judge, High Court of Mysore and Vice-Chancellor, Mysore University, as Chairman.

The Assistant Commissioner of Labour, Bangalore Division and the Headquarters Assistant to the Commissioner of Labour, will act as Secretary to the Committee.

Improving Oomras Cotton in Hyderabad.—One of the objects of the scheme for the improvement of Oomras cotton in Hyderabad State is the " production of an early maturing and high ginning strain of a certain Gaorani variety which seems well suited to the eastern half of Parbhani District in the Oomras tract." By resorting to a single plant selection an early maturing substrain, which is superior to the parent strain in yield, ginning, outturn and spinning capacity, was obtained.

Another strain has given significantly higher yield than the local variety for the last two seasons and hence this year (1944-45) it was included in the main varietal test. It has not only given yields higher than those of the local variety but it was observed to be equally early maturing. Its ginning outturn is 2-3 per cent. higher and from its fibre properties it may be expected to spin 30s counts whereas the local variety spins 8s and 10s counts.

Import Licences for Fine Cloth : Assembly Debate.—Two hundred and nine import licences for the import of fine cloth, covering approximately 5,000,000 yards, had been granted to regular established importers for import from the United Kingdom from July, 1942, to December, 1944, said Sir Azizul Haque, the Commerce Member, replying to Mr. Manu Subedar in the Central Legislative Assembly at New Delhi last month. No import licences had, so far, been issued this year.

He indicated, in reply to a further question, that 10,000,000 yards were intended to be imported in 1945 from the United Kingdom. The exact qualities included in the allocation to India were not known, but some might be similar to those produced in India. The Chairman of the Textile Control Board had been kept fully informed of the facts. The Commerce Member said steps were being taken to import yarn also.

"Save Electricity" Drive in Bombay.—An intensive drive to stop wastage of electricity and so make more power available for industry has been started in Bombay.

Letters are being sent to consumers asking them to co-operate, and similar appeals are being made in newspapers. Posters, cinema slides and hoardings all carry the message: "Save Electricity—It is Precious."

Bombay has already made a considerable contribution to the industrial war effort. More, however, remains to be done: existing plants have to be extended and new industries have to be started. All this means a greater demand for electricity. More electricity means the use of more coal, more oil, more water-power. Supplies of all these are now short; so further industrial development depends largely on effecting economy in the present consumption of electricity.

Electricity can be saved in offices and houses by (1) reducing lights in passages and outside the premises to a minimum, (2) using as few lights as possible in occupied rooms, (3) always turning out lights and switching off fans when rooms are unoccupied, (4) using bath-heaters and other electrical appliances as sparingly as possible.

Industrial Research in Mysore.—The Board of Industrial Planning and Co-ordination was reconstituted as the Board of Scientific and Industrial Research in 1943-44 mainly with a view to widening the scope of its activities, particularly in the field of industrial research and investigations which are of vital importance to the industrial development of the State and to maintain a closer and more effective liaison with the Board of Scientific and Industrial Research, Government of India, so that the State could benefit from the research conducted under the auspices of the latter Board.

The other activities of the Board of Industrial Planning and Co-ordination in connection with the work relating to planning and co-ordination, the utilisation of the results of research, the starting of new concerns, the reviewing of the work of the departments concerned with war supply and civil production were entrusted to a new committee called the "Industrial Planning and Co-ordination Committee" (of the Board of Industries and Commerce). To this committee has been transferred further work on the investigations relating to bobbin manufacture. Preliminary investigations are reported to have been successful and artisans in Bangalore City have already taken up bobbin manufacture although on a limited scale.

Foreign

Post-war Cotton Problem: Plea for International Agreement.—A majority of the representatives of cotton producing countries who met recently in Washington is understood to favour the adoption of an international cotton agreement.

Indo-Australian Trade: Revolutionary Increase.—World war conditions have revolutionized Australia's overseas trade. In five years imports of civilian goods from India have increased by 315 per cent. and Australian exports to India by 410 per cent.

In the same period civil imports from and exports to the United Kingdom dropped by 43 per cent.

Offer from Mills to Carry out Tests on New Machines.—The British Cotton Board's Post-war Committee has had offers from six firms for the selection of a spinning mill for the carrying out of tests on new machines and different conditions. When selected the test mill is to be started under conditions of working recommended in the British Cotton Mission's report on experience and practice in the United States.

British Cotton Mills to Reopen.—Four cotton mills in Britain, for which between 12,000 and 14,000 workers must be found, will be reopened shortly, says the *Daily Telegraph.*

Sir Frank Platt, Cotton Controller, announcing this, said: "This is the turning time for the cotton industry. It is the beginning of the upward trend." He added that the supply position of cotton goods continues to depreciate, and it was hoped that at a later date two or three other mills would be reopened. The four mills in question were among the 150 closed under the "concentration" scheme of 1941.

World Production of Cotton During 1944-45 Season.—Unofficial estimates suggest that about 52,000,000 bales of cotton will be produced throughout the world during the 1944-45 season and a larger world cotton surplus than in any past year is in prospect. It is also revealed that cotton countries will have available for export something like 20,000,000 bales in the 1944-45 season, compared with about 13,000,000 bales in normal pre-war years. Consumption has shrunk in the war years, and the prospect must be faced that cotton producers from now on will meet increasingly stiff competition from synthetic fibres and materials.

Indian Art in Industry Exhibition in London.—Under the auspices of the Government of India an exhibition of modern Indian commercial art was held in London in January this year. The exhibition was opened by the Rt. Hon'ble L. S. Amery, Secretary of State for India. The photograph shows Indian troops recently liberated in Italy visiting the exhibition.

French Textile Industry in Good Condition.—The French textile industry is in good condition, except possibly in the East, it was stated in French trade circles. The Lyons area is said to be practically undamaged.

It was stated that about one-fifth of the French textile mills had been destroyed or moved into Germany.

Raw materials are, of course, much needed to carry on operations and the lack of sulphur has caused a sharp cut in French rayon output. Negotiations are said to be going on with the United States for the import of American sulphur into France.

It has also been reported that the French Government will pay 80 per cent. of the cost of repairing and replacing textile plants and buildings hit by the war.

Refresher Course in Textile Technology.—It is reported that the Department of Textile Industries, Leeds University, proposes to give a refresher course in Textile Technology.

The course is planned to occupy three months and is intended for service men who have had previous training in textile technology. The lectures occupy ten hours per week, leaving twenty hours per week for practical work, which may be spent in those sections of the Department in which the student is most interested. At the end of the course service men should be fully acquainted with the developments which have taken place during war years, and they should have had ample opportunity of renewing their acquaintance with the machinery and processes of the industry.

Egyptian Cotton for Britain.—Sir Frank Platt, the Cotton Controller in England, has returned from a hurried visit to Egypt and the Sudan. Trade circles believe that he has arranged for shipment to the United Kingdom of substantial amounts of raw cotton previously purchased in Egypt and kept in warehouses there for a long time. The British Government have been drawing heavily upon the United Kingdom stores of Egyptian cotton for shipment to French and Belgian mills. There is now distinct shortage of medium stapled and medium long stapled Egyptian types here.

It is understood that the Egyptian traders have brought pressure on Sir Frank Platt for information as to how soon Liverpool's futures market will reopen, but he is unable to suggest any probable date.

More Clothes for British People.—For at least a year after the "cease fire" sounds, shabby-looking Englishmen will get more clothes for their clothing coupons. This view was expressed by the Secretary of the Wholesale Textile Association, Mr. W. T. Caves, through whose hands the monthly figures of the clothing stock piles go Britain-wide.

Though the present position is very unsatisfactory, Britain's stock of raw wool is greater than it has ever been.

Australia Getting Back to Pre-war Civilian Cloth Standards.—An increase in manufacture in Australia of better-class woollen and worsted cloths for men's suitings has been approved by the Australian Minister for Supply, who said recently that it was expected that the quantity of better class worsteds produced in future would closely approximate the quantity made before the war. The demand now is much greater than before the war. The production of better class cloths reduced the total yardage available, because it took a considerably greater spinning capacity to make it. The controlling factor is man-power and the man-power available to the textile and clothing industry is insufficient. But production of better grade cloths will be further increased immediately the general supply position in Australia permits it.

Merger in Textile Machinery Industry.—An important development in British textile machine manufacture is reported by the *Yorkshire Post.* This is a merger between one of the biggest cotton machinery makers in Britain and an important wool machine firm. The merger, according to the statement made by one of the companies, will enable manufacturing processes, patent rights and research work to be pooled.

Present technical trends seem to be removing the dividing line between the cotton and wool industries and the two organizations working as one unit can concentrate on the manufacture of standard types of machinery, so greatly reducing production costs.

Benefits are also expected on the sales side from this fusion of interests and the textile machinery industry as a whole will be in a stronger position to meet foreign competition in overseas markets.

British Exporters and Price Levels in India.—Reviewing the India Government's expansion of the list of permitted imports, the *Manchester Guardian* Financial Correspondent declares that this is a valuable opportunity for British exports to re-establish themselves in the Indian market, though supplies are still severely restricted and the problem of prices must be solved on long-term lines. " In the case of our exports to India, there is no control of export prices here and internal price control which India imposes merely limits the addition which may be made to landed price of imports. British exporters can thus get more than by selling at home. On the other hand, it would be fatal for British traders to take undue advantage of the temporary scarcity abroad, by asking immoderate prices, for they must get long-term customers. Between these opposing trends, our prices must be nicely balanced. Thus far there has been no attempt to exploit the market. To mention one striking example, wooden shuttles for cotton looms have been imported into India from the United Kingdom at 3*s.* 6*d.* each whereas similar shuttles were imported by the Government of India from the United States at 21*s.* each. Perhaps this was carrying the old-fashioned British ability a little far considering that Indian cotton spinners were at the same time making colossal profits."

Fewer Spinning Mills in America.—The number of cotton spinning mills in America is now 179 fewer than a decade ago. This is revealed by the Department of Commerce, which reports that there are now 867 mills, against 1,046 in 1935.

Fifty Years Ago

(From the *Indian Textile Journal,* April 1895)

A Suggestion to V. J. T. Institute

" We would venture to suggest the introduction of some of the best types of handlooms in the V.J.T. Institute. In some of the American technical institutes the handloom is the first machine the student must understand even if he has already worked a power-loom. In India the handloom will for a long time exceed the power-loom in numbers and a knowledge of the best type suited to Indian weavers might with advantage be introduced into the scheme of studies at the Institute."

The Indian Textile Journal

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Founded by **SORABJI M. RUTNAGUR**

55 th Year

22 JUN 1945

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EDITORIAL

Peace in Europe

THE war in Europe is over. After five years and eight months of changing fortunes the Allies have emerged triumphantly from the ordeal, but there are disturbing factors in the international situation which might frustrate the attainment of enduring peace unless all the resources of far-sighted statesmanship are called into effective action. Grave is the responsibility of the powers for ensuring that the international collaboration which has won the war for them does not fail them in winning the peace.

Although the war in the East may be expected to continue for some time more, the transition from war to peace may be taken to have set in with the cessation of hostilities in Europe. Now that the war orders on industry are likely to taper off and conditions return gradually to normal, the importance of giving a new orientation to official control and taking in hand the reconversion of industry to peace-time needs can hardly be exaggerated. The process of reconversion has already begun in England and America and, if they are not to be allowed to steal a march over India in the markets of the world, the process of switching over Indian industry to peace-time production must start from now on.

Important Milestone to Industrialization

THE official statement of industrial policy issued by the Government of India* has been described as an important milestone on the road to industrialization. It contains important proposals for Government assistance to industry, which include the promotion of scientific and industrial research and technical education, the provision of financial support to research organizations set up by associations representing organized industry and of grants to universities for approved schemes of research in addition to the help available from the direct Governmental organization for research, the Council of Scientific and Industrial Research. Assistance will also be afforded in the procurement of the capital goods required by industry, for which purpose it is proposed to set up organizations in England and America. Far the most important points of the statement relate, however, to State participation in industrial enterprise. Public utilities and railways are already State-owned and State-operated and it is now proposed to add the bulk generation of electric power. Further, it is laid down that important basic industries, including chemicals and dyes, iron and steel, and electrical machinery may be nationalized if private capital is not forthcoming or if nationalization is considered necessary in the country's interests. All other industries are to be left to private enterprise under varying degrees of control, the consumer goods industries, like the cotton mills, being open to free competition and subject to no more control than is necessary to ensure fair conditions of work and wages for labour. For this purpose a number of industries are to be removed from the jurisdiction of the Provincial Governments and brought directly under the sphere of the Central Government. There is no question of restricting profits in these industries ordinarily, but where conditions of free competition do not exist the Government will have the right to take suitable steps to prevent the accrual of excessive profits. It is also proposed to maintain the quality of industrial products by means of a system of standardization. The evils of over-concentration and lopsided developments are to be avoided by arranging for the regional distribution of industries through a system of licences for the construction of new mills and factories or their expansion. With regard to tariffs, we are informed that the formulation of an appropriate long-term tariff policy is under active consideration, but that, as a short-term measure Government will be setting up machinery for investigating the claims for protection by not only such of the industries as were promised protection in 1940 but also others which have helped to sustain the national economy during the last six years.

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* Please see page 533.

A few weeks earlier Government had announced the functions and personnel of the industrial panels constituted to advise them on post-war reconstruction; the mill industry, however, has not been given a separate panel for itself, the Textile Control Board continuing to act for it in this connection. The reports of these panels on the establishment of new and expansion of old industries will be examined by the Government of India in consultation with the provincial industrial committees before an over-all plan for India is decided upon. The production target for the cotton mill industry in the first five-year period after the war has been fixed at an increase of 50 per cent. over the present level. The general directive issued by Government to these panels indicates the importance of the work they are being called upon to take up. According to this directive the panel reports are to cover such points as the scope and extent of development, the extent to which technical advice from abroad may be necessary, the location of the industry, the nature of the Government assistance required, the maintenance and expansion of export markets and the possibilities of developing industry on the cottage basis as in Japan.

So far as the mill industry is concerned the proposal to bring it under Central control should meet with approval in view of the repeated demands that legislation regarding that industry should have all-India application. But it is difficult to understand why Government should persist in constituting the Textile Control Board as the panel for the cotton mill industry. Several cogent reasons have been advanced against converting a body established primarily for advising on control into the industry's mouthpiece in every conceivable kind of situation. As regards licensing, the aim obviously is the attainment of a balance of industrial activities between the different regions and the extension to all parts of the country of proportionately equal opportunities for industrial employment and expansion. The Distribution of Industry Bill sponsored by the Board of Trade in the House of Commons has the same object in view. Raw cotton no doubt grows in all parts of India and the markets for cotton textiles are also spread out over the various regions, so that there should be no particular reason why the mill industry should have concentrated in centres like Bombay. All the same it does not help anybody to forget that it was Government's own railway freight policy, coupled with the proximity of raw material, the availability of electric power and the initial dependance on export markets, which favoured the concentration. Now that Government have declared themselves anxious to avoid the evils of such concentration millowners naturally desire to know whether Government have made up their minds " in regard to the areas where, in their opinion, the cotton textile industry would not be permitted to extend," because this information would assist in the placing of orders for capital goods. Beyond the assurance of procuring capital goods for industry, official announcements have not so far revealed whether Government have already ascertained from the Governments of the United Kingdom and the United States of America the volume and types of machinery available and their price-levels. Similarly the question of tariff has raised several doubts. Have the Government, it is being asked, any reciprocal arrangements in view with other countries linking up the imports of cotton piecegoods with the exports of raw cotton ? If not, how do they propose to arrange for the absorption of the entire Indian cotton production? Another question that requires an unequivocal answer is whether Government contemplate the extension to the United States of America of the preferential tariffs at present accorded to Britain in the colonies and the Dominions. If so, what will be the position of the Indian mill industry in the post-war period against competition from American cotton piecegoods and yarn ? The immediate proposal seems to envisage the appointment of a temporary tariff board, provided the number and nature of the claims for protection justified the setting up of such a board. This tariff board, we are told, may not be set up if the claims are few in number, or if the demand for protection relates to the post-war period and not to the immediate transitional period. Whether there is any justification for such excessive caution remains to be seen, however.

How India's Cotton Mill Industry

Six Years of War in Retrospect

AFTER the fall of France a greater responsibility was thrown on Commonwealth countries east of Suez for supplies of men and war material not only for their internal defence but also for supporting the vital garrisons in Egypt. India was then called upon to play the role of the arsenal of Eastern countries in terms of her undertakings at the Eastern Group Conference.

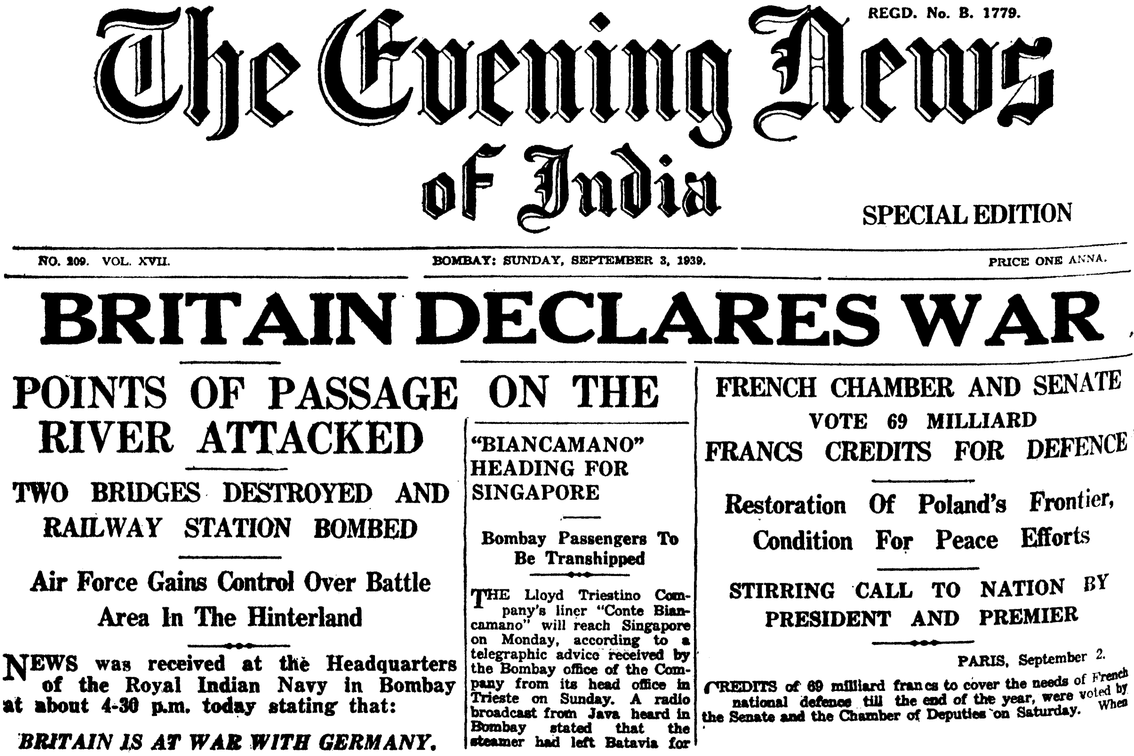
While this factor gave a tremendous fillip to India's industries, it was also responsible for replacing imports—thus relieving other countries for war production. India began to manufacture a very large proportion of defence requirements, ranging from shirts to ships, from buttons to bridges, from goggles to guns—not only of her own but of all countries of the Eastern Group.

Huge armies had to be clothed, equipped and fitted for battle in every theatre of operations. In the tropical jungles they required cotton clothing and equipment woven from cotton yarn. Tarpaulins were required to cover their supplies, and tents not only for shelter but also for use as hospitals. Cotton was also required for large quantities of mosquito nets for the troops. It was used in the making of bomb-carrying tapes, rifle slings, aeroplanes and automobiles. Even fireproof tanks had to be made from cotton duck.

No wonder that India's cotton textile industry was called upon to supply millions of yards of cloth for defence needs.

The Beginning—

Sunday, 3rd September 1939 . . . .



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BRITAIN DECLARES WAR

POINTS OF PASSAGE ON THE RIVER ATTACKED

TWO BRIDGES DESTROYED AND RAILWAY STATION BOMBED

Air Force Gains Control Over Battle Area In The Hinterland

NEWS was received at the Headquarters of the Royal Indian Navy in Bombay at about 4-30 p.m. today stating that:

BRITAIN IS AT WAR WITH GERMANY.

"BIANCAMANO" HEADING FOR SINGAPORE

Bombay Passengers To Be Transhipped

THE Lloyd Triestino Company's liner "Conte Biancamano" will reach Singapore on Monday, according to a telegraphic advice received by the Bombay office of the Company from its head office in Trieste on Sunday. A radio broadcast from Java heard in Bombay stated that the steamer had left Batavia for

FRENCH CHAMBER AND SENATE VOTE 69 MILLIARD FRANCS CREDITS FOR DEFENCE

Restoration Of Poland's Frontier, Condition For Peace Efforts

STIRRING CALL TO NATION BY PRESIDENT AND PREMIER

PARIS, September 2.

CREDITS of 69 milliard francs to cover the needs of French national defence till the end of the year, were voted by the Senate and the Chamber of Deputies on Saturday. When

Answered War Demands

Its outturn, both mill and handloom, ran to several thousands of millions of yards a year, which enabled her to send considerable supplies to all the other countries of the Eastern Group besides meeting her war supply requirements. No fewer than 138 items of cotton textiles were obtained from the mill and handloom industry. Up to the middle of 1942 Government's war demands amounted to 20 per cent. of the industry's output, but a year later they were 35 per cent. of its manufacturing capacity.

Tents for the Army

An important item produced by the industry was anti-gas fabric. One of its major contributions to supply is tentage for which new centres of production were opened in 1940, resulting in the establishment of 53 new tent factories. India occupied a unique position among the Commonwealth countries for the supply of tentage. Although small quantities of canvas tents were made in Australia and South Africa, by far the largest number of tents for the Eastern Group countries as well as for the Middle East and Far East centres of war have been supplied from India.

The total value of tentage contracts placed in 1939-40 was approximately Rs. 1 crore; 1940-41, approximately Rs. 8.3 crores; 1941-42, Rs. 13 crores; and purchases for 1942-43 were worth Rs. 16 crores. About 50,000 labourers of all classes—tailors, *mochis*, rope-makers, supervisors, etc., are employed in the job.

In woollen textiles the entire capacity of the industry, both mill and handloom, was taken over for the production of various war supplies such as blankets, rugs, hosiery,. etc. By June 1943 the handloom industry had supplied 2,000,000 blankets.

Large numbers of sola pith hats have been manufactured and supplied to troops in India and overseas. Another important item, the demand for which increased steadily, was camouflage nets made from strips and ribbons of jute cloth, dyed in various colours.

Sevenfold Increase in Parachutes

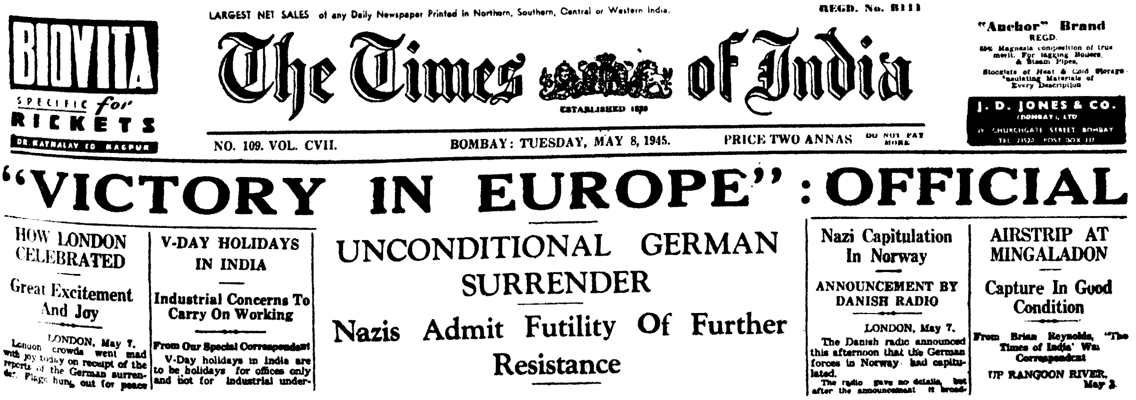
In 1944 the manufacture of parachutes generally and of supply-dropping parachutes particularly increased sevenfold. Rapid strides have been made in the production of cotton parachutes. Between January and August 1944 production stepped up to more than three times the figure for the number of parachutes manufactured from the commencement of production to December 1943. Equipment-dropping parachutes, for which Indian silk was used, have also been manufactured.

This important war job was done in two factories solely employed in the

(*Continued on page* 536)

. . . . *and the End—*

Tuesday, 8th May 1945



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"VICTORY IN EUROPE" : OFFICIAL

HOW LONDON CELEBRATED

Great Excitement And Joy

LONDON, May 7.

London crowds went mad with joy today on receipt of the reports of the German surrender. Flags hung out for peace

V-DAY HOLIDAYS IN INDIA

Industrial Concerns To Carry On Working

From Our Special Correspondent

V-Day holidays in India are to be holidays for offices only and not for industrial under-

UNCONDITIONAL GERMAN SURRENDER

Nazis Admit Futility Of Further Resistance

Nazi Capitulation In Norway

ANNOUNCEMENT BY DANISH RADIO

LONDON, May 7.

The Danish radio announced this afternoon that the German forces in Norway had capitulated.

The radio gave no details, but after the announcement it broad-

AIRSTRIP AT MINGALADON

Capture In Good Condition

From Brian Reynolds, "The Times of India" War Correspondent

UP RANGOON RIVER, May 3.

INDO-AUSTRALIAN POST-WAR TRADE PROSPECTS

India Should Replace Japan

By MICHAEL BROWN

Honorary Adviser, Indian Industrial Delegation to Australia
(Specially Contributed)

Exclusive Photographs by courtesy of the Bureau of Public Information, Government of India, New Delhi

LARGE-SCALE trade in textiles between India and Australia is almost entirely a product of the war. Before 1939 India sent Australia about a million yards of cotton piecegoods a year, plus small quantities of raw cotton, yarn and twist. On the other hand, India's imports of Australian wool were equally small—less than Rs. 5 lakhs worth in 1939-40, with only very small quantities of Australian woollen cloths.

After the war in Europe began the position changed rapidly. In 1942-43 India sent Australia more than 113 million yards of cotton piecegoods. This was greatly reduced the following year under the export quota scheme, but it is still around 38-40 million yards annually. In addition, Australia takes annually from India more than 5,000 tons of raw cotton and from three to four million lbs. of twist and yarn of which grey of 11s to 20s counts is in the greatest demand.

In the reverse direction Indian imports of Australian wool have climbed to over 23 million lbs., worth more than Rs. 3,67 lakhs or more than one-fifteenth of all Australian wool exported in 1943-44.

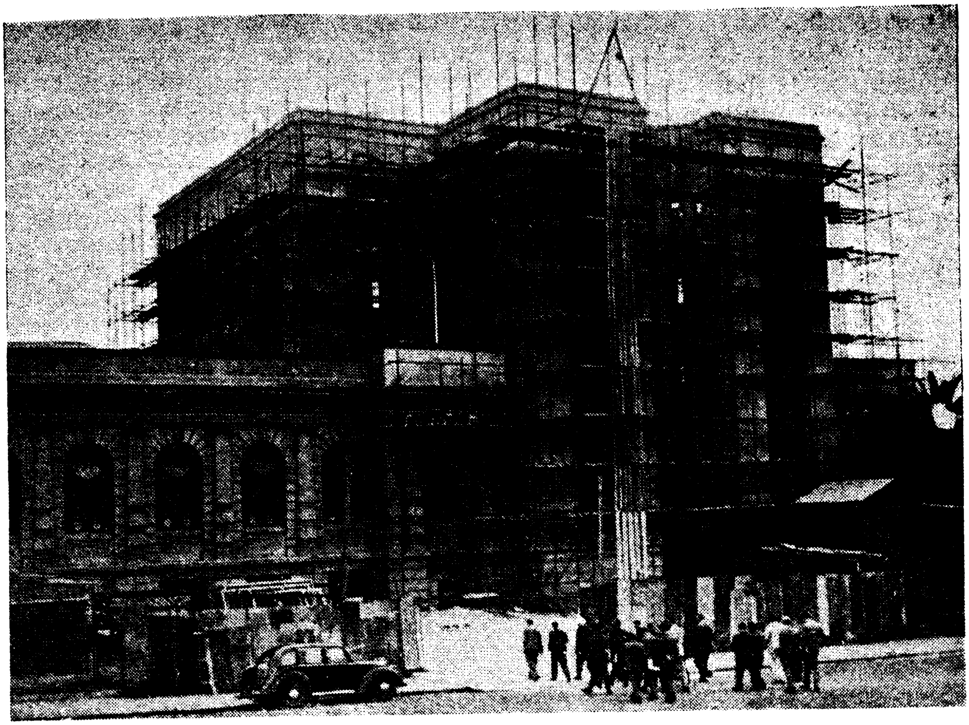
The statistics just quoted represent abnormal conditions, but I think they may be of significance in the post-war world when India and Australia will be unable to sell to Japan their cotton and wool.

> The disappearance of Japan has left a big hole in the Australian market—a hole which Lancashire may not even want to fill and which she certainly has not filled for a good many years.
>
> This slice of Australian trade could certainly be claimed by India if her exporters are prepared to go out and get it. There are also new lines to be exploited. I have already mentioned printed goods, but there are furnishing fabrics and handloom goods to be thought of. These would all enjoy a ready sale in Australia if the right type of materials were sent over. One point may be the necessity of offering Australia rather wider widths of handloom cloths than are popular in India. Many types of *sari* fabric would be popular for dresses were they made wider. These are matters which would well repay expert investigation.

Japan's Pre-war Trade Activities

Any survey of Indo-Australian trade prospects in the post-war period must take into account the likelihood of Japan's absence from the world's raw materials and textiles markets. Before the war Japan bought Australian wool and re-exported a good deal of it to India in the form of worsted yarn and low grade woollens, including mixtures with cotton and rayon. In return, Australia bought a considerable proportion of her cheaper cotton textiles from Japan who manufactured them from Indian cotton. Japanese activities thus discouraged closer trade relations between India and Australia.

This point was made clear by the Indian Industrial Delegation which



The Gordon Technical Institute at Geelong, Victoria, is constructing a £200,000 wool appraisement and instruction centre, which is to be maintained jointly by the woollen industry and the State Government. Members of the Indian Industrial Mission are here seen beginning an inspection of the new building. There are over 2,000 students at the Institute.

recently visited Australia. They lost no opportunity of pressing the view that India should replace Japan in the Australian textile market. They also pointed out that any rise in Indian living standards would sharply increase their country's demand for wool and woollens.

This latter aspect of post-war trade between the two countries does not yet appear to have been fully appreciated by Australians, most of whose trading—at any rate in wool—appears to be focussed on London. This has been especially the case during the war when Britain has bought up the whole Australian wool clip and controlled its distribution.

Australia Wants More than 210 Million Yards of Cotton Textiles a Year

What is the position likely to be regarding cotton and cotton textiles ?

If we reckon possible Australian consumption at 30 yards of cotton cloth a head a year (the same as the minimum standard for India in the Bombay Plan) we find they will need 210 million yards of cotton cloth annually. But that figure is probably an underestimate. Most of the Western countries consume nearer 40 yards a head a year. Australia has a high living standard (a factor which directly affects cloth consumption) and a warm climate which encourages the wearing of cotton for a greater proportion of the year than is possible in Europe or North America.

Given the right types of material and an energetic sales policy, there is no reason why Australia should not lead the world, on a *per capita* basis, as a consumer of cotton piecegoods.

Present Consumption below Normal

At present Australia is consuming only a proportion of her real needs. Clothes rationing is strict and a cotton shirt requires a considerable number of coupons. In spite of the high standard of living, few Australian men can manage to buy half a dozen shirts a year. Slightly frayed collars are no longer a sign of shabbiness. A Sydney firm which offered to turn shirt collars and cuffs was quickly booked out for three months ahead.

During 1943-44 India supplied about a fifth of Australian imports of canvas, duck, cotton and linen. (Australia's total imports £14,982,000 sterling. Value of Indian cotton piecegoods exports to Australia: £2,750,000 sterling.)

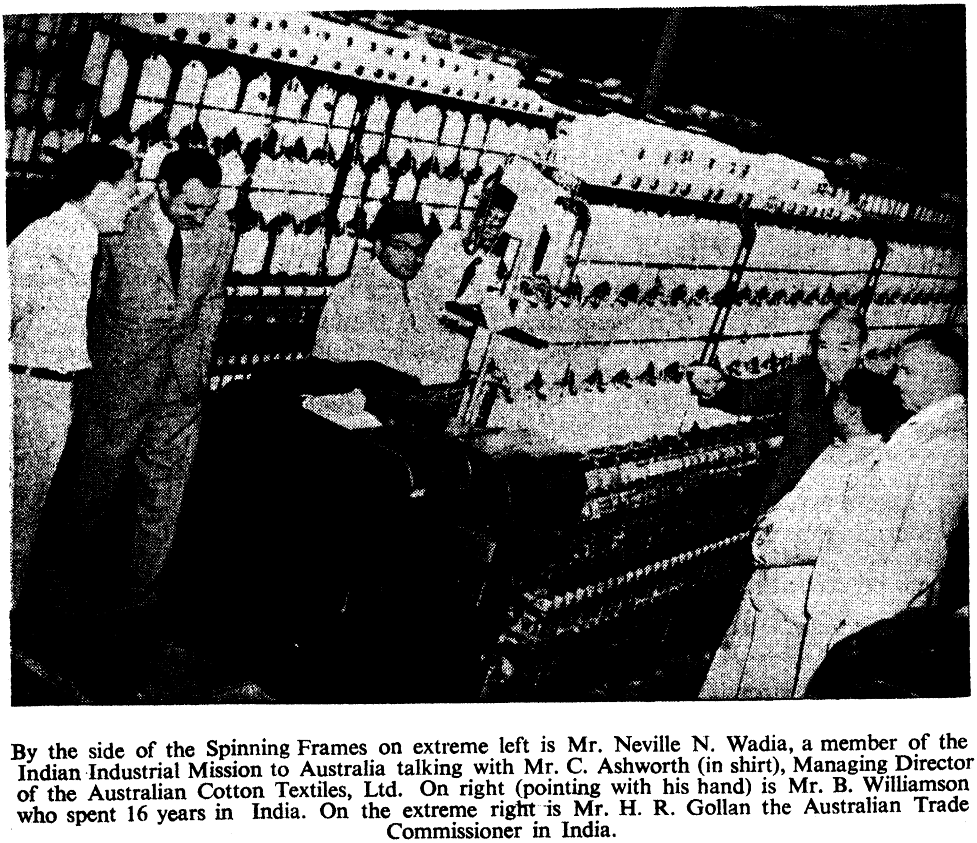
These figures do not, however, give a true picture of the Australian potential. Both Indian exports and Australian imports are limited. Furthermore, a variety of austerity measures have been introduced to limit consumption of scarce or expensive materials such as fine shirtings. For a considerable period one of Australia's most famous shirt-makers were offering customers shirts made of very ordinary white calico with fronts, cuffs and collars of shirting. That method of economizing appears to have been discontinued, but the gift of a good cotton shirt is still very welcome. The same remark applies to women's dress materials.

Though most hotels and homes are making the best of the extremely limited supplies of such essential needs as towels, sheets and curtaining, the size and quantity of towels available in most Australian hotels was remarked on by members of the Indian Delegation. The large "bath sheet" is to-day unknown and in most Australian bathrooms one finds bath towels of the smallest size—about the same size as a large hand towel. Homes which did not carry stocks of household linen before the war now find a certain amount of difficulty in keeping going.

Australians are up against textile shortages such as India has never known. As for curtains, furnishing materials and so on, almost every Australian household is waiting till the end of the war. The post-war demand for textiles is, therefore, piling up rapidly.

What is Australia's Own Textile Policy ?

Apart from what Indian mills may be able to supply and the Australian public



By the side of the Spinning Frames on extreme left is Mr. Neville N. Wadia, a member of the Indian Industrial Mission to Australia talking with Mr. C. Ashworth (in shirt), Managing Director of the Australian Cotton Textiles, Ltd. On right (pointing with his hand) is Mr. B. Williamson who spent 16 years in India. On the extreme right is Mr. H. R. Gollan the Australian Trade Commissioner in India.

may desire to buy, we have to take into account a number of other factors when assessing post-war prospects. The first is Australia's own textile policy. The second, the export policies of such countries as the U.K. and U.S.A.

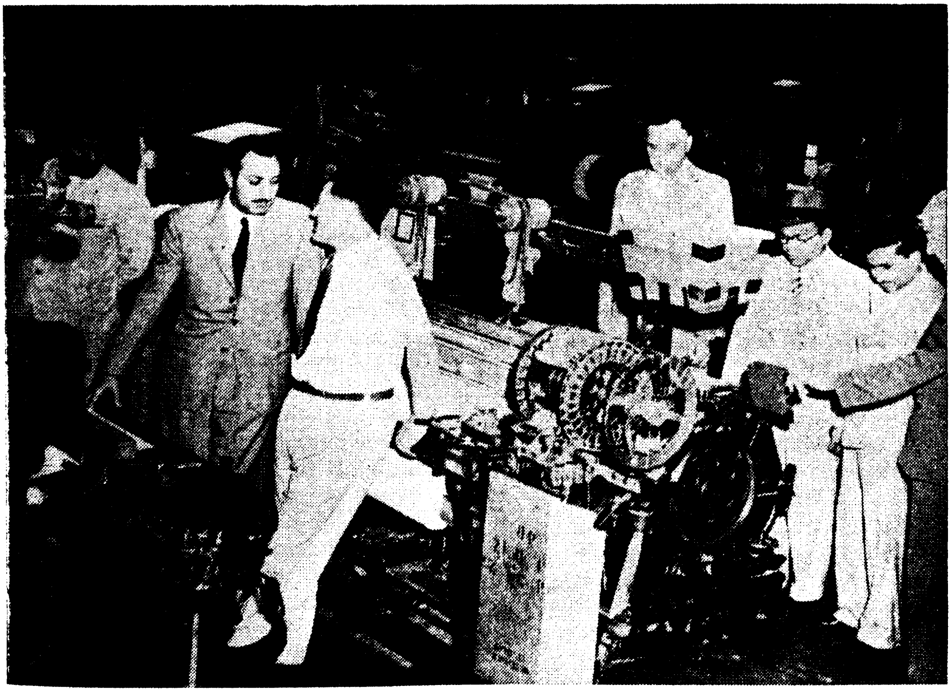
Let us deal with Australia's own objectives first. Like every other country, Australia has no intention of being caught short again in time of war. Everyone hopes for permanent peace, but Indians will appreciate the attitude that no country should be almost totally dependent on overseas sources for vital necessities. Australians feel most strongly about cotton textiles. The entry of Japan into the war and the inability of India, Britain and America to supply more than a fraction of Australian needs have roused Australians to a true realization of the danger of their position.

To-day there are a small number of cotton textile mills in Australia. I have not been able to obtain any exact data regarding the relationship of their output to Australia's real needs, but it is fair to say it represents only a small fraction. Some of these mills were lucky in obtaining their equipment just before the war cut off supplies. The first operating years have, therefore, been a boom period and the desire to expand is inevitable.

Australians do not claim that they should be self-contained for cotton textiles, but they do believe that they should produce a certain minimum. Moreover, Australian cotton mills enjoy a fortuitous tariff protection. Some years ago steps were taken to protect Australian wool from types of imported cotton goods which were thought to be competitive. Though intended to protect wool, this step provided Australian cotton manufacturers with a ready-made market.

It is probable that these interests will tend to expand in Australia after the war and that rayon will also be included in the Australian production field. At the moment, Australians seem to think that rayon will compete more fiercely with cotton than with wool.

In the discussions which the Indian Industrial Delegation held with Australian manufacturing and business interests stress was often laid on the imponderable factors of post-war production costs and



Members of the Indian Industrial Mission inspect an automatic loom in the weaving shed of the modern factory of Australian Cotton Textiles Ltd., at Woodville, South Australia.

Australia supplies the cardboard cores for much of the yarn she purchases from India. In this photo members of the Indian Industrial Mission are watching the automatic manufacturing of cores at a factory in Sydney. In the photo the Managing Director of the concern (second from the right) is explaining the manufacturing to Mr. Neville Wadia and Sir Datar Singh.

the general state of trade in the post-war world.

Such factors have a very considerable bearing on the cotton industry. Compared with India, Australian costs are likely to be heavy because of the high level of wages. On the other hand, these drawbacks are to a certain extent offset by high output, high grade products and modern plant.

Most Australian cotton factories are very new and they have been efficiently planned. These factors would be important especially if the Australian cotton industry attempted to establish a case for complete tariff protection—a point which I will discuss more fully in a later paragraph.

No Conflict with Lancashire

Efficiency of production will also be a feature of the output of India's competitors. Lancashire plans to re-equip herself and there are indications that the Americans will take all possible steps to maintain their output on the most efficient basis.

So far as British products are concerned, Australians have few doubts about Lancashire's capacity to supply their needs of top grade goods. There is also a sentimental attachment to Britain which plays an important part and is a factor which Indian exporters must take into account.

On more than one occasion the Indian delegates were asked squarely whether they intended to compete with Lancashire and it was fairly obvious that an answer in the affirmative would not have been popular. As it was, the Indian delegates were able to point out with perfect justice that Indian and Lancashire products did not compete, that Indian manufacturers would naturally concentrate on lines which they had already found to be saleable and that as members of the British Commonwealth they considered they had a good claim to replace Japan in the Australian market. That reply appears to have been satisfactory, but it is very evident that any talk of "replacing" Lancashire in Australia must be taboo.

American Competition in Women's Dress Goods

The Americans possess certain advantages because of their influence in the women's dress market. Printed goods have a very ready demand, especially in the weights suitable for summer washing frocks. Exports to Australia may be in the form of pieces or of made-up goods. This practice has considerable value to the American manufacturer who can make his cloth in very long runs and market about 60 printed designs each season.

The same designs are often equally popular on Australian and American markets and since the finished dress is cheap, the quantity of any particular design it is possible to sell is hardly limited.

If we reckon possible Australian consumption at 30 yards of cotton cloth a head a year (the same as the minimum standard for India in the Bombay Plan) we find they will need 210 million yards of cotton cloth annually. But that figure is probably an underestimate. Most of the Western countries consume nearer 40 yards a head a year. Australia has a high living standard (a factor which directly affects cloth consumption) and a warm climate which encourages the wearing of cotton for a greater proportion of the year than is possible in Europe or North America.

In spite of prevailing impressions about American mass production methods, the wide range of designs and colours which American manufacturers can offer in women's dress goods—a very profitable line—is a most important factor in their favour. Indian prints will have to improve considerably in design, technique and variety if they are to face this competition.

What are India's Chances ?

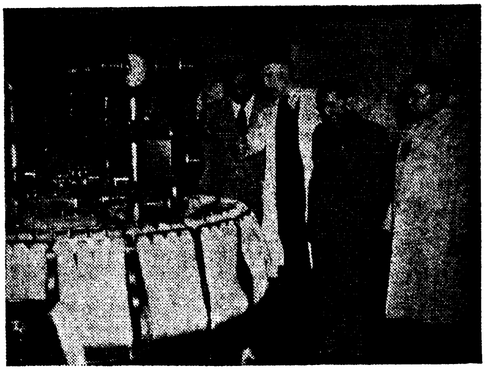
All these qualifying factors do not mean that there is no opening for Indian piecegoods in the post-war Australian market. I think their chances are excellent, provided the market is carefully studied and close attention paid to qualities and prices.

Such advice may seem trite, but it should not be forgotten that to-day's high Indian price levels very nearly cancel out any advantage we may have over the high-wage-rate countries, and there is always the possibility of such competitors as Brazil entering the field. There should also be no complacency over the reputation of Indian products in Australia. Early in the war they acquired a somewhat bad name and this is going to take some living down.

Need for Vigilance Regarding Export Qualities and Prices

This unfortunate reputation is not entirely the fault of Indian millowners. The early war-buying was in many cases undertaken by Australian firms and individuals who were not familiar with the textile trade and they often did business with speculators who had got into the Indian market. The result has been thoroughly unsatisfactory for both Indian manufacturers and the regular Australian cloth traders and the public. It, therefore, behoves Indian exporters to exercise the utmost care in descriptions and samples of their goods and to deal through established firms. Opinions expressed to me in Australia about Indian cloth left no doubt in my mind about the necessity of strict control of export qualities on the lines of the Textile Control Board's plan until India's reputation is completely re-established.

On more than one occasion the Indian delegates were asked squarely whether they intended to compete with Lancashire and it was fairly obvious that an answer in the affirmative would not have been popular. As it was, the Indian delegates were able to point out with perfect justice that Indian and Lancashire products did not compete, that Indian manufacturers would naturally concentrate on lines which they had already found to be saleable and that as members of the British Commonwealth they considered they had a good claim to replace Japan in the Australian market.



Indian Industrial Mission members watch the spinning of wool at the Factory of Paton and Baldwin, Ltd., Launceston, Tasmania, the largest spinning mill in Australia.

Market for Indian Raw Cotton, Yarn and Twist

Australian purchases of Indian yarn, twist and raw cotton may also assume an increasingly important role in the post-war trade between the two countries, especially as the production of cotton in Australia seems subject to definite limitations.

Cotton occupied some 40,000 acres in 1943-44 and yielded some 9,500,000 lbs. of raw cotton. The crop has made considerable strides in the past couple of decades and in 1933-34 occupied 87,000 acres with a yield of 17,718,000 lbs. The main growing area is Queensland. However, Australia's limited amount of manpower makes cotton a somewhat unsatisfactory crop unless machine-picking becomes a practical proposition. The sharp fall in cotton acreage during the war suggests how much the level of wages and the availability of labour can affect the crop. There, therefore, seems to be little or no likelihood of Australia making herself self-contained for cotton. Even when more land is brought under cultivation in suitable areas, crops which demand less hand-labour are likely to be grown.

Australian Tariff Policy

Reference has already been made to the problem of Australian tariffs. Australia has reached the stage at which most Indian industrial planners aim. That is, industries which are likely to provide employment and provide the public with goods at reasonable prices are given complete protection from the moment of their inception.

As I have pointed out, Australian cotton millers got their protection almost by accident—Australians were at that time more concerned about protecting their wool. Until more is known about post-war trade trends and costs of production it is impossible to forecast whether this industry will be afforded any greater degree of protection. At present Indian cotton goods enjoy an intermediate tariff. That is, they do not have all the advantages enjoyed by Lancashire, but they do have some advantage over countries outside the British Empire—such as Japan before the war.

It is possible that India could obtain more favourable treatment. The Australian Tariff Board, whom the Indian Industrial Delegation met, explained that in the past India had put up no case for special treatment and consequently her claims had not been taken into consideration. It is evident, however, that the Australian authorities would be disposed to deal generously with other members of the British Empire. As matters stand at present the incidence of Australian tariffs reduces the possibility of India competing with Lancashire.

Indo-Australian Trade Agreement ?

The possibility of a trade agreement between India and Australia was mentioned on several occasions during the delegation's tour and if this were to come to pass, there is no doubt that Indian cotton and textiles would figure largely.

However, to my mind all these factors seem of less importance than the fact that the disappearance of Japan has left a big hole in the Australian market—a hole which Lancashire may not even want to fill and which she certainly has not filled for a good many years.

Mill Experts Must Study Australian Market

This slice of Australian trade could certainly be claimed by India if her exporters are prepared to go out and get it. There are also new lines to be exploited. I have already mentioned printed goods, but there are furnishing fabrics and handloom goods to be thought of. These would all enjoy a ready sale in Australia if the right type of materials were sent over. One point may be the necessity of offering Australia rather wider widths of handloom cloths than are popular in India. Many types of *sari* fabric would be popular for dresses were they made wider. These are matters which would well repay expert investigation.

Indian Market for Australian Woollen Goods

I have space to deal only briefly with wool. Members of the delegation left no doubt that India could take a very fair slice of Australia's wool outturn. Australians were struck by a remark to the effect that if the hundred million people in the part of the country from which two of the delegates came could buy a sweater or blanket each, Australia would have no need to worry about her wool surplus.

Australian woollen manufacturers still think on the lines of supplying cloth or knitted goods to India. It has been pointed out to them that a somewhat cheaper type of goods will be necessary to catch the popular Indian market. One of the delegates put forward the view that owing to the difference in manufacturing costs between Australia and India, the more processing done in India the better.

However, it has been made clear to Australians that the types of woollen cloth they are producing at present would have only a limited market in India and that prices and styles of goods would need to be different to catch the main market.

As regards yarn, the Australians point out that at present there is a world shortage of spinning equipment and that they can hardly produce enough for the needs of their own weavers. It is, however, possible, when this industry is freed from

(Continued on page 543)

Industrialization of India

Official Statement of Policy

THE Government of India have issued the following statement on industrial policy:—

"The Government of India have reached a stage in their planning of industrial development when they consider it would be in the public interest to make an announcement of the conclusions reached by them on various aspects of policy. There has not been time to consult either Provincial Governments which are at present constitutionally responsible for industrial development in Provinces or States between whom and British India a high degree of collaboration will be necessary if the maximum results are to be achieved from a vigorous industrial policy. Some of the proposals will eventually have to be placed before the Legislature for approval. Although, for these and other reasons, the conclusions reached are, to some extent, provisional, the Government of India consider that an announcement of their views may help to clear up the uncertainty which appears at present to be impeding plans of development by private industry.

Industries: A Provincial Subject

"Under the Government of India Act, 1935, the development of industries is a Provincial subject, but is open to the Centre to declare by law that the development of certain industries under Central control is expedient in the public interest and thereupon, the development of such industries becomes a Central subject. No such Act has in fact been passed by the Central Legislature with the consequence that the development of industries is at the moment wholly a Provincial subject. In view of this, some explanation is necessary as to why the Government of India feel themselves called upon to issue a statement of their industrial policy. The reasons are twofold. In the first place, the general economic policy pursued by the Government of India under their own constitutional powers exercises a profound influence over industrial development. It is a matter of history, for example, that the cotton textile, the iron and steel and the sugar industries have made rapid strides in India largely as a result of the fiscal policy pursued by the Central Government. In the second place, the progress of planning has made it abundantly clear that certain industries must be taken over under Central control in the interests of co-ordinated development. It was indeed contemplated by Parliament, when the Government of India Act was passed, that industries in which a common policy was desirable would be brought under Central control. Government consider that for achieving the foregoing object the following industries among others, should be centralized, but before coming to a final decision they will consult the provinces and the leading Indian States:—

"Iron and steel; manufacture of prime movers; electrical machinery; heavy machinery, such as textiles, sugar, paper, mining, cement and chemical; machine tools; heavy chemicals and fine chemicals, chemical dyes, fertilizers and pharmaceutical drugs; electro-chemical industry; cotton and woollen textiles; rubber manufacture; electric power and coal.

"When the necessary legislation is passed by the Centre, the Government of India will have direct constitutional authority for shaping the progress of a number of industries of vital importance to the country's development. It may be pointed out, although the point is clear enough, that this arrangement has no long-range constitutional implications. It is intended to be in operation for so long as the present Constitution lasts; and to what extent it will survive beyond that period is a matter to be decided by the future.

"The policy to be pursued by Government must be governed by what they consider to be the proper objectives of industrial development and the steps that will be necessary, in the conditions in which India will find herself after the war, to enable these objectives to be achieved. Government consider that the fundamental objects of industrialization are threefold:—(i) To increase the national wealth by the maximum exploitation of the country's resources. (ii) To make the country better prepared for defence. (iii) To provide a high and stable level of employment.

"It is axiomatic in Government's policy that the additional wealth created by industrial development should be distributed in a manner that may be regarded as socially equitable. Powers must be taken and consciously used to secure this purpose.

"The attitude of Government towards industry in the past was for many years one of *laissez faire*. Till the war of 1914-18 this policy was maintained in the belief, which was in accordance with current economic doctrine, that industrial progress was best achieved by unregulated private enterprise. This attitude underwent some modification after the last war through the adoption of the policy of discriminating protection.

"Under the Government of India Act, 1919, however, industries became a provincial subject. The Government of India lost direct interest in industrial development and the provinces had neither the financial nor the technical resources to stimulate development on any significant scale.

Vigorous Industrial Policy Needed

"The Government of India consider that the continuance of their existing policy, in the conditions in which India will find herself after this war, will not meet the objectives of sound post-war development. Though industrially stronger than in 1939, India will find herself in a position of relative inferiority. In other countries technological advances have been immense and, as a result of the nature of modern warfare, there has been a striking increase in the total volume of skilled industrial labour. If India is to make rapid headway and if the standard of living of the masses is to be effectively raised, a vigorous and sustained effort is necessary in which the State no less than private industry must take a part.

"Government have decided to take positive steps to encourage and promote the rapid industrialization of the country to the fullest extent possible. They attach particular importance to the development of those industries which constitute the foundation of modern industrial life, such as the iron and steel industry, the heavy engineering industries, the machine tool industry, the heavy chemical industry and so on. But while the development of these industries must take high priority, it must form part of a balanced plan in which due place is given to consumption goods industries. It is clear that if progress is to be achieved, the development of industry must be planned by Government in co-operation with industry and every effort made to make the plan effective.

" The formulation of a tariff policy appropriate to the post-war needs and conditions of the country is under active consideration. The subject, however, is one of great complexity, and will require a little further time for the Government of India to determine its policy and devise the machinery for implementing it. In the meantime, the position of industries which have been established or developed in war-time requires consideration. Some of these are covered by the announcement made in 1940 in regard to the grant of an assurance of post-war protection to essential war-time industries. Outside the scope of this announcement, however, lie a large number of industries which have helped to sustain the national economy during an exceptionally difficult period. The provision of assistance to or protection of such of these industries as have been established on sound lines is likely to assume a measure of urgency during the period of transition. Government propose to set up machinery without delay for the investigation of the claims of such industries for assistance or protection. This is a short-term measure pending the formulation of long-term tariff policy and the establishment of a permanent machinery for the purpose.

Basic Industries to be Nationalized

" A primary point in industrial policy is the extent to which the State will take part in industrial enterprise. In India, ordnance factories, public utilities and railways together forming a considerable proportion of the total industrial enterprise are already very largely State-owned and State-operated. This arrangement will naturally continue. Further, Government have recently decided that the bulk generation of electric power should, as far as possible, be a State concern. This decision falls within the existing pattern of State and private enterprise. Apart from ordnance factories, public utilities and railways, basic industries of national importance may be nationalized provided adequate private capital is not forthcoming and it is regarded as essential, in the national interests, to promote such industries. For the purpose of Government policy, basic industries can be defined as including aircraft, automobiles and tractors, chemicals and dyes, iron and steel, prime movers, transport vehicles, electrical machinery, machine tools, electro-chemical and non-ferrous metal industries. It is contemplated also that Government may take over certain industries in which the tax element is much more predominating than the profit element and it is necessary and convenient for the State to take over the industry. An example of such action in the past is " Salt manufacture."

" All other industries will be left to private enterprise under varying degrees of control. There may be no control except such as is required to ensure fair conditions for labour, in the case of such industries as those catering for ordinary consumers' demands and subject to free competition. While in the case of industries of a semi-monopolistic nature or which control scarce natural resources there may be a stricter control varying with the circumstances of each case.

" Within the field considered open for State enterprise, the question whether the existing units which are privately-owned should be taken over by the State will be examined on the merits of each case. The Reconstruction Committee of Council has decided in regard to electricity undertakings that, as licences fall due, they will as far as possible be taken over by the State or quasi-State organization.

" The case of coal will be examined and dealt with separately.

Government Assistance to Industry

" Government have a primary responsibility, which they propose to discharge without delay as soon as war conditions allow, for developing certain prerequisites of industrial progress. One of them is the development of transport facilities. This is a matter in which both Central and Provincial Governments as well as the Indian States are vitally interested and steps to ensure a co-ordinated policy have already been initiated and made considerable headway. Another prerequisite is the development of power. The Government of India have made good progress in ensuring co-ordinated development in this field. Another prerequisite of industrial progress is scientific and industrial research; the Government of India have already devoted considerable attention to it and they propose to take all steps which their resources will allow for seeing that it is maintained at a high level. Technical education, particularly through high grade technological institutes, and technical training of personnel required for skilled employment are also matters in which the Government of India have initiated action which will directly assist industrial progress.

" In addition to discharging their responsibility for thus laying the foundation of industrial progress, the Government of India are prepared to assist industry in one or more of the following ways:—

" Government will take part either by making loans or by subscribing a share of the capital, in industrial undertakings which are considered to be of importance to the country's development, but for which adequate private capital may not be forthcoming. Within this category might fall such industries as those manufacturing chemicals and dyes, iron and steel, prime movers, electrical machinery, etc. Industries receiving this type of assistance will be subject to a greater degree of Government control than others. For example, Government might require representation on the Board of Management and that their sanction should be obtained for incurring certain types of expenditure and for certain appointments. Government might provide in suitable cases capital equipment like buildings, services and/or machinery on terms to be settled on the merits of each case. This might in certain cases take the form of bulk Government orders for capital goods which might then be allocated to industrialists on suitable terms.

" In special cases, industrial enterprise will be encouraged by guaranteeing a minimum dividend on capital or undertaking to meet revenue losses, for a fixed number of years, subject to the condition that Government would have a voice in the management and that a ceiling will be fixed for the return on capital. Where this procedure is followed, profits in subsequent years over and above the ceiling will be appropriated towards returning the funds paid by Government and after this has been done, such excess profits as continue to accrue will be divided by the Government and the Company in agreed proportions.

" Government will be prepared to give adequate financial support to research organizations set up by Industrial Associations representing organized industries and to provide for grants to Universities for approved schemes of research. Such assistance would be in addition to direct Government organization of research as, for instance, through the Council of Scientific and Industrial Research.

" Subject to reasonable safeguards as to quality and price, Government will continue to encourage Indian industry by buying its products in preference to others.

" The Government of India are examining the question of the promotion of an Industrial Investment Corporation or a similar institution.

" Government will undertake to examine from time to time, the tax system with a view to ensuring that, while securing the ends of social justice and national budgetary interests, the taxation does not tend to act adversely on development.

" Government will assist in the procurement of capital goods required by industrialists. They propose to set up an organization in the U.K. and in the U.S.A. for this purpose.

" In certain branches of industry, the advice of experts is particularly essential. Government will help in making the services of such experts available to industry.

Licensing of Industry

" Government have come to the conclusion that they must take power to license industrial undertakings. They have at present no power except for emergency war-time controls, to regulate the growth of industry; normally a person may put up a factory wherever he likes and may manufacture in it whatever commodity he chooses. There are, of course, local laws which regulate the size of the buildings, the proportion of open space, public health needs and so forth and it is possible under these regulations to refuse permission to put up a factory building, but such refusal cannot be based on considerations of industrial development. One effect of this unregulated freedom to promote industrial enterprise has been the concentration of industry in certain areas, for instance, the manufacture of cotton textiles has been concentrated in Bombay and Ahmedabad; sugar in the United Provinces and Bihar ; paper in Bengal. In some cases, there are good grounds for the concentration of particular industries in particular areas, but in many cases, it has been the result of fortuitous and haphazard growth. There are vast areas in this country which, though suitable for industrial development, have not been developed because industry has tended to flow in particular channels.

" The effects of such concentration are economic, social as well as strategic. It seems unsound from the strategic point of view that so large a proportion of industry should be concentrated in a few cities which might well be vulnerable to attack. On the social side it is clear that concentration creates housing problems of a most acute type. Perhaps, an even more important consideration is that concentration deprives other areas of the country of the beneficent effects of diversified economy. Lastly, it is not clear that concentration is necessarily economically sound. The markets for textiles, for instance, are situated all over India, and cotton, the main raw material, is also grown in various parts of India. From the point of view of the consumer, it would obviously be right to cut out unnecessary transportation costs and to locate manufacture where both the raw material and the market are situated. Even where concentration appears relatively cheap on the basis of financial costs of production and distribution, it would, in many cases, be found, in the long run, both socially and economically cheaper to disperse industry, if regard is paid to the benefits of a widely spread industrial structure and its integration with agriculture.

" Control over development would be necessary from another point of view. In an unregulated industrial economy there is likely to be a tendency for capitalists to go in for schemes which promise quick returns. This will lead to lopsided development—a scramble for some industries, with the danger of overproduction and excessive competition and inadequate attention to other industries which are equally necessary in the national interest. To overcome this difficulty it would be necessary to fix targets, to allocate them on a regional basis and to see that these targets are achieved.

" As Government has no authority at present to do this, they will have to take powers by legislation. Government propose that they should take power to license the starting of new factories and the expansion of existing factories, for, without this power, planned industrial development will be quite impossible. At the same time, in order to avoid unnecessary delays it is proposed to set a monetary limit to the plants or projects requiring license so that very small plants, moderate extension of existing plants or replacements which do not add to output, should not be subject to licensing. Details of this legislation are under consideration. Even on a preliminary examination, it is manifest that the power proposed to be taken by Government must be used in a manner that will command general public confidence. It is equally clear that the administration of the licensing system must be such as to assure Indian States that their legitimate desire for industrial development is not overlooked. It is accordingly proposed that a Board should be constituted at a high level to advise the Central Government in the matter of granting licenses for centralized industries. Details of the personnel of the Board, its function, and other connected matters will be decided later.

Other Controls

" In a planned economy it is impossible to do without controls. Government consider that such controls should be the very minimum required. They propose that apart from licensing, control should be undertaken to achieve the following objects:—

"To secure balanced investment in industry, agriculture and the social services. It will be necessary after the war, to ensure that the available capital resources are utilized on a balanced plan of agricultural, industrial and other development and that inside the field of industrial development, a balance is kept between the manufacture of capital and consumer goods. Agricultural development will be undertaken almost wholly under the auspices of the State. On any reasonable estimate, the capital resources required for it will be heavy, and it will be necessary to ensure that the State is in a position to mobilize them from the country's savings. This will make it necessary to maintain control over capital issues; for, otherwise, capital may flow excessively in one direction and lead to lopsided development.

"To secure for industrial workers a fair wage, decent conditions of work and living and a reasonable security of tenure. It is a fundamental objective of industrial development that it should enable the general standard of living to be raised. It would be a frustration of this objective if industrial workers do not get fair wages and decent working conditions. In the past, these matters were left largely to be settled between the employers and the workers, but it may be necessary for the State to intervene with statutory powers. This question is engaging the earnest attention of Government and the necessary legislation will be undertaken from time to time.

"To prevent excessive profits to private capital. In the case of private undertakings, subject to free competition, it would be a mistake to discourage enterprise by undue restriction of profits. The risks of such enterprise are considerable and if industrialists are to bear the losses, they must also be permitted to reap the profits. In the normal course the tax system may be expected to prevent any excessive accumulation of profits. Where, however, conditions of free competition do not exist and as a consequence, excessive profits accrue, special steps would be necessary. These can only be considered on the facts of each case as it arises.

"To ensure the quality of industrial products in the interests of both internal and external markets. It is of the utmost importance to ensure good quality for the internal as well as the external markets. This involves standardization of products and administrative machinery to enforce standardization.

"To ensure that unhealthy concentration of assets in the hands of a few persons or of a special community would be avoided. This may be secured by a judicious exercise of controls, such as capital issues control and the licensing machinery for the regionalization of industry.

"To require necessary technical training of personnel and to extend the benefit of such training to minorities and backward communities.

"The Government of India propose without delay to enter into discussions with Provinces and with the Indian States in the light of the policy stated above and are confident that it will be possible to evolve a machinery which will enable an agreed policy to be implemented in practice in a spirit of friendly co-operation on the part of all parties concerned."

How India's Cotton Mill Industry Answered War Demands

(*Concluded from page* 525)

manufacture of cotton parachutes and one factory in the manufacture of man-dropping and equipment-dropping parachutes and ancillary equipment.

Clothing Supplies

The year 1943 was the peak year with regard to the supply of tailored items of clothing. India was then the nearest supply base for armies in the Middle East and in March 1943 over 12,000,000 items were fabricated. In the fifth year of war the ordnance clothing factories supplied just under 7,000,000 items a month.

Eight ordnance factories have been fully employed on fabrication of tailored items of clothing and necessaries. They employed a labour force of 90,000 excluding the indirect labour employed by tailoring contractors throughout India. In the fifth year of war they accounted for and converted some 215,000,000 yards of textiles, over 5,600,000,000 yards of sewing threads and over 500,000,000 buttons and numerous minor components into 78,941,597 tailored items of clothing and necessaries.

Chemicals

With over 100 per cent. increase in production since the beginning of the war, India's chemical industry has now come into its own. Soda ash, caustic soda, bleaching powder, chlorine, sodium and potassium bichromates, chromic acid, sodium thiosulphate and calcium chloride are some of the more important chemicals now being produced in large quantities, which were not produced or were produced only on a very small scale before the war.

Cottage Industries

The cottage industries, thriving in villages and rural areas, have not lagged behind. Millions of yards of camouflage nets and large numbers of pith hats were made by villagers in various parts of India.

In 1941-42 direct war orders to the value of Rs. 498 lakhs were placed with small-scale industry. In 1942-43 additional orders to the value of Rs. 610 lakhs were placed.

Taxation Policy and Lower Dividends

Sir Victor Sassoon's Outspoken Remarks

THE following are extracts from the speech of the Chairman, Sir Victor Sassoon, Bart., at the 36th ordinary general meeting of the Edward Textiles, Ltd., Bombay:—

" When the general meeting was held last year, Government had just announced their intention of immobilizing all excess profits and the effect of this policy is brought out very clearly in the appropriation account. Adding the 1944 net profit of Rs. 9.07 lakhs to the balance of Rs. 1.47 lakhs brought forward from the previous year, and deducting Rs. 2 lakhs for current depreciation, no less than one-half the amount of our issued share capital should have been available, that is, Rs. 8½ lakhs, out of which to recommend a higher dividend and at the same time to leave a substantial amount to be carried to reserve.

" The compulsory deposit of our excess profits with the Government absorbs, however, no less than Rs. 6,35,000, and out of the balance left it is not felt unjustifiable to recommend a larger dividend than Rs. 15 per share, which proposed dividend will absorb Rs. 1,27,000, leaving Rs. 92,886 to be carried forward to 1945.

Faulty Dividend Policy

" Some mills in Bombay have used more than the cash available to them from the year's working in order to pay their dividends, but the Directors take a conservative view in such matters and do not believe that a policy of mortgaging the company's future in order to maintain current dividends at a high level can ever be satisfactory or indicative of wise stewardship if a long-term view is taken.

" Last year Government announced their intention of immobilizing the whole of the excess profits. This year they have gone a step further. By increasing the surcharge on income-tax by 3 pies in the rupee, and leaving the compulsory deposit at last year's figure of 19/64ths of the excess profits tax paid, they now take 0.51 per cent. *more* than the excess profits. The cash required for this extra payment has to be taken from what the company has left after paying income-tax and corporation tax on its standard profit: and in addition to this, the extra corporation tax of one anna in the rupee on dividends must also be found out of what remains of the standard profit. Although to the casual observer these demands may not appear to have much bearing on the question of dividends, they have in fact reduced the free cash available for dividends out of the 1944 profits of the company by no less than Rs. 3 per share.

Managing Agents' Commission

" Shareholders have sometimes asked why the Managing Agents should be allowed to take a larger share of the profits by way of commission than the shareholders receive by way of dividends. At first glance, this may seem to be a pertinent question, but let us examine it in its true perspective, and in relation to facts. The figures of your company for 1944 are, managing agents' commission Rs. 6,47,231, and appropriation for the proposed dividend, Rs. 1,27,500. First, I would remind you that in the bad times of the past the Managing Agents have not hesitated to waive their claim to the commission to which they were entitled : in the good times of the present, while excess profits are being made, any amounts waived by the agents would merely be collected by Government and there would not be one pie of extra cash immediately available for distribution to the shareholders. In fact, for the reason I have just explained to you, there would be *less* free cash available because any commission waived would increase the excess profits and this in turn would increase the over-collection by Government which can only come out of the standard profit.

" The real cost to the company of the Managing Agents' services in 1944 is less than Rs. 1½ lakhs, compared with over Rs. 9 lakhs which is the company's profit for the year after paying agents' commission and providing for taxation. I am sure that you will not call less than Rs. 1½ lakhs an excessive amount to pay for the work done by your Managing Agents who, while shouldering the responsibility of all industrialists in serving the interests of the country and its needs, have yet been able to safeguard the interests of the company and to preserve its goodwill.

Financing Re-equipment

" Out of the profits earned to the end of 1944, we shall have deposits with the Government amounting to almost Rs. 15 lakhs which are to be returned to us after the war, and, what the balance sheet does not show, Government will have to refund to us Rs. 6.41 lakhs of the excess profits tax we have paid. Because excess profits tax is deducted in full when arriving at the profits which are assessed to income-tax and corporation tax, these refunds will be liable to income-tax and corporation tax when received. At current rates of taxation, the net value of the refunds will be about Rs. 3.71 lakhs, which I think you will agree is a useful contribution to the company's resources, making about Rs. 18. 71 lakhs in all to be received from Government as refunds and repayment of deposits. Thus at the cessation of hostilities we expect to be in a satisfactory position and shall have funds available either to replace old machinery or to improve and modernize the existing machinery as we may wish. This means you have the best of two worlds: in the post-war world you can reconstruct, while in the present you are able to work your machinery to a maximum to obtain the maximum benefit now.

" During the year the mill has been worked three shifts on spinning to provide yarn for double shift working of the weaving shed, and also to help to meet, to the maximum of our capacity, the great demand from the handloom industry. The heavy wear and tear of your plant and machinery which has resulted from this intensive working has necessitated greater expenditure on repairs, and as new replacement parts become available it is expected that our expenditure under this head will increase. In the early years of the war we had the advantage of large stocks of stores and machinery spare parts bought at relatively low prices, but these stocks have now been consumed. Owing to war conditions replacement stocks have at times been difficult to obtain and have tended to deteriorate in quality, but in spite of this we have maintained a high standard in our current purchases.

Labour

"We have always recognized the important part which labour plays in the industry, and our cordial relations with our labour force have continued throughout the year; but the increased remuneration of labour in recent years has in a way added to our difficulties, since workers when they draw their yearly bonuses show an increasing tendency to return to their villages, and their replacement with *badli* workers for the duration of their holiday further increases the difficulties of management.

Rationalization

" Much publicity has been given recently to the policy of increasing production by reducing the number of sorts manufactured, as a means of meeting the acute shortage of cloth. As a result of the curtailment of war demands, we have been able to reduce the number of sorts now produced in your mill to two only, one for Government and one for civilian requirements. This concentration on two sorts has resulted in further improvement in the already high standard of efficiency of your mill and has enabled us to balance production so that all your machinery is used to the greatest advantage.

"Comparisons are bound to be made as to the results of this policy, and our working results for 1944 bear out my contention that the ceiling prices have in the past been very much in favour of luxury cloth, particularly, those which are dyed, mercerized, bleached and super-finished.

" We have always conceived it to be our duty to produce the maximum quantity of yarn and cloth your mills are capable of making and so to further the combined war effort. It is pleasing to note that the Textile industry now feel that the price stucture of civilian cloths should be revised to encourage the production of utility cloths, and to discourage luxury materials, cloths which are wasteful of yarn, and cloths which waste fuel by elaborate and unnecessary finishes.

How to Increase Production

"The only absolute solution for the present difficulties in the cloth trade is to produce more cloth—to produce more cloth, more machinery must be installed or there must be no stoppages of the machinery which is now available and it must be worked to its maximum capacity. Neither of these remedies can be successful unless coal is available to work the machinery; apart from the obvious solution of increasing coal output, coal can be saved by curtailing the manufacture of styles that require excessive finishes—bleaching, dyeing, mercerizing, etc. and using the coal so released for the manufacture of yarn or grey cloth. If the quantity of cloth which is now being given such elaborate and unnecessary finishes were cut down by only one half, enough coal would be released to run to its full capacity the spinning and weaving machinery which is now stopped from time to time for want of coal. This would mean sacrifices by the bleaching and dyeing trade and by small bleachers and dyers which could be relieved by levying a small cess on all producers of grey cloth which of course should be allowed as a charge on their gross profits. In times such as these, sacrifices must be made by everyone. Sacrifices cannot all be on the side of the industry—rationing is a form of sacrifice which, if made willingly and in a spirit of co-operation by all consumers would make stocks go further and help to a rational distribution of the limited supply of cloth which is available. I welcome the recent announcement that the Government of Bombay has decided to ration mill-made cloth of the varieties commonly in use, but with cloth stocks in retail stores now reduced to a minimum, I feel that the present scheme, even with such increased production as can be contemplated, will not cover the shortfall unless each consumer makes a real personal effort to reduce the quantity of cloth he uses.

Balancing Machinery and Plant Requirements

" The end of the last war saw the collapse of many businesses. Fortunately for us, the change-over from war to peace-time conditions does not constitute any major problem, as our machinery can turn out goods for the civil market just as well as it can meet Government demands for the war effort. While in recent years our efforts have been concentrated on meeting Government demands, and are now being concentrated to an increasing extent on helping to meet the acute shortage of cloth for civilian consumption, our technicians and marketing staff have been engaged in drawing up careful plans of post-war machinery requirements. This entails something more than mere replacement of worn-out machinery by the latest type of the same machinery. The problem is to ensure that the machinery in each section is balanced with that in all the other sections so that maximum production combined with flexibility can be assured, and the company may be enabled to face competition with every advantage in the post-war world.

" Japan, whose exports of cloth and yarn reduced the industry here almost to beggary, will be in a very bad state for a number of years. From more than one source I have been given to understand that more than 80 per cent. of her textile machinery, including new spindles which had been kept unused and intact for post-war production, has been scrapped to make up for the shortage of the scrap metal which Japan used to get from the United States and other countries. That is no negligible factor in our optimistic outlook.

" The industry can and should set its house in order. All that we ask from Government is that we should be granted facilities to replace at reasonable cost our plant and machinery which has been worn out on their work; that we should be enabled to install new machinery where required; that our refunds of excess profits tax should be be made available to us as and when we want them, and that we should never again be called upon to face competition conducted not on commercial lines but on totalitarian principles forming part of the broader national policy of hostile nations."

Problem of Mill Recruitment in India

Some Practical Hints

BY N. L. DESAI, *Rajratna Mills, Petlad*

(*Specially Contributed*)

THE present system of recruiting personnel for mill jobs is haphazard. For the lowest grades it is left to jobbers, the middle grades are selected from lower grades on personal influence and/or work, and the systems of selection for the supervisory staffs vary with the mills.

Before a person obtains knowledge of textile technical subjects or processes, he should have acquired a general knowledge of the primary or middle school or college standard. For that reason, I shall divide the mill jobs into the following five broad groups:—

(1) Ordinary job workers such as tenters, weavers, etc.

(2) Fitters or machine tacklers.

(3) Supervisors.

(4) Assistants and heads of departments.

(5) Managers.

For the people falling under group No. 1, they should have acquired a sufficient knowledge of reading and writing, say, a minimum of vernacular standard IV. When they come to towns for seeking mill jobs the following points should be impressed upon them:—

(1) The general idea of mill jobs, (2) the idea of discipline, (3) the necessity of uniform type of dress for a given job and (4) knowledge of Hindi.

As soon as a person comes to a city for seeking a mill job, he should be enrolled on the waiting list of *badliwallas*. The real difficulty is in selecting the personnel for groups Nos. 1 and 2. These persons have no background of the type of mill work they are after nor do they generally inherit the art of spinning, weaving or dyeing-bleaching.

If he has not studied upto the vernacular IV, the candidate should attend the school classes conducted by the mills and complete the course of:—

(1) Arithmetic, i.e., reading, counting and writing upto 100.

(2) Language, i.e., reading and writing of the simple vernacular words which are spoken by him. This practice will ultimately put him in a position to read a daily vernacular newspaper.

(3) Attending during the recess hours along with other workers the talks and the news items broadcast from a loudspeaker in the mill-compound.

Unless he fulfils the above conditions, he should not be entitled to training in the department. When he has secured an admission card he should be asked to choose a particular job; and after he has chosen the job to which he feels he has an aptitude, he should be taken to the department concerned. It is not absolutely necessary to set aside one or more machines in a place away from where the work is actually done on a commercial scale, but the machine or machines on which he is to be trained should be in the corner, and not in the middle of the shed. The person so selected should be taken on the machine and his course of instruction should be as follows:—

(i) Study from the booklet the names of the machines and their parts. He should be shown each part of the machine and told its proper name. He should remember it by heart. The functions of each part and the machine itself should then be explained to him.

(ii) Timing and setting of the machine in general.

(iii) Starting and stopping of the machine. How and why and under what circumstances the machine should be started or stopped.

(iv) Cleaning and oiling of the different parts of the machine.

(v) Precautions and regulations to be observed to avoid accidents and faulty material.

(vi) The common defects.—How to avoid them and repair them during the course of manufacture.

The training should be in the hands of the supervisors of the departments concerned and should not be left to workers or jobbers, though they may work side by side with the regular workers. They should not be allowed to be away from work during working hours, which will be about six hours in the beginning and all their questions and difficulties should be solved by the supervisors and should be explained in simple vernacular language. The training period cannot be fixed as it will depend upon individual ability and the nature of the work; but in no case should it be less than a month. When he has completed his training period, he should be given a substitute's pass and should be given work; in the beginning his work should be light as far as possible, i.e., for example, in the beginning he shall attend to one loom and gradually to two looms. During the first three months, he should be checked for (i) his ability to do the given work, (ii) regularity, (iii) discipline and (iv) general behaviour; and if he is not found upto the mark within three months he should be either sacked or given an option to select another job (in case he has satisfied conditions Nos. 2, 3 and 4). If he is upto the mark he will become the regular substitute worker and will be made permanent (as and when the vacancy arises), according to one's seniority.

Fitters

The selection of the personnel for the second group should be made from the first group. Not all but a few have a natural instinct for machine-tooling and out of the workers who are found to be good at machine-tooling, should be selected the fitters or machine-tacklers. Their sole responsibility will be to maintain the machine in working order. They will not be responsible for production, as at present is the case with a jobber, who is both a fitter and supervisor; his responsibility is of a double nature. He must keep the machine in working order and maintain its efficiency, which is too much to expect when we find that he is also responsible for getting the worker and training him for the job. The result is, he is overworked and cannot give the maximum efficiency in the given work. A good fitter cannot be a good supervisor at the same time. All supervisors are not necessarily good fitters. The nature of the two types of work is quite different and hence separate persons should be selected for the respective jobs. No doubt we shall have to revolutionize our existing system if we are to follow the above method.

Supervisors

Now for the third group, the candidate should have completed the matriculation course and should have sound physique. He should undergo a training course of the department in which he desires to serve. He should be required to study the machines of the department in detail. Before he has completed the training course, he should have grasped (i) the names and functions of different parts of the machines, individually as well as collectively, and (ii) the setting and timing of the machines in detail: the common defects in a machine; cleaning, oiling, etc., (iii) should have worked at least six months as a regular and responsible worker on the machine of the department (section of the main department) in which he desires to be ultimately a supervisor, and (iv) the causes of faults that affect the quality and the quantity of the material (yarn or cloth).

His function will be to see that all the machines are kept running for the maximum time with minimum stoppages and the machines producing the best possible material with the maximum efficiency. All the department workers should be under his control so that he may have the necessary power to influence production.

Assistants

Now coming to group No. 4, where the candidate has not only to be conversant with the departmental work in detail, but his main duty is to arrange and distribute the work and manage the department efficiently and economically. He must also have a general knowledge of the industry and detailed knowledge of the different systems of working of his own department as well as various types of machines in his department.

The candidates to be trained up as assistants should in time by experience and ability occupy the posts of heads of departments and should therefore be graduates in arts or science.

In my opinion, most people taking up diploma or certificate courses in spinning, weaving or dyeing and bleaching in a technical institute, after matriculating, get a general idea of all the processes during a period of, say, four years but always lack practical experience and detailed knowledge of the departmental processes and working on a commercial basis, and are unable to take up responsible posts for the above reasons; they enter the mills either as apprentices or supervisors. Unfortunately they have the notion that they have studied everything in an institute in which the smallest possible units of machines are assembled and worked to show their working; and stereotyped notes and lectures are given in class rooms on the different subjects. They desire (and it is but natural considering that they have already spent valuable time and money) to occupy officers' posts in the shortest possible time. They are under the impression that they have already studied the machines and the processes of the department in which they have stepped in.

In the case of a graduate in arts or science, he will have a broader outlook on life, more grasping power, possessing higher knowledge of the general subjects. He is sufficiently advanced in age to choose his profession, but a matriculate while, selecting a line for his career, is simply led away by others and follows a particular line for which he does not know whether he is suitable. When he has completed his course in a technical institute, he has sufficiently advanced in age and is in a position to distinguish between one line and another on merits, but unfortunately it is too late for him to go the other way (to change the line) at this stage. If he does not follow the line in which he has received technical education, he has the only alternative of serving in a very low position in any other line unless he takes to business, while a graduate who after working for some time in any department of a mill, finds that the mill job is not suitable to his temperament, can easily afford to change the line as he has the necessary higher basic education (general education) for following any line.

For group No. 4, the training course should be the following:—

(i) Training in each sub-department of the main department, which the candidate has selected. The training should consist of the following :—

1. Complete study of the machines and processes, including timing, setting, common fault in a machine, etc.
2. Should have worked at least for six months as a regular and responsible worker on all important types of machines of the department concerned.
3. Regular reading of technical journals.
4. Study of daily and monthly departmental production reports.
5. Construction of yarn or cloth, including all the systems of preparatory processes, under the guidance of an assistant, i.e., he may observe the things, put forward his difficulties and learn the art from experienced colleagues.
6. Passing of test examinations conducted by technical associations like the Textile Association (India).

During the apprenticeship a stipend should be paid, which will be an investment from the mill point of view, and from the apprentice's point of view a sort of help to maintain himself. It is argued that those without any technical training in an institute, when trained up in a particular mill, are lacking in different systems of the mills or machines. It is also true that those trained up in an institute neither have the practical knowledge of all the different machines (except the theoretical knowledge) nor of the different systems of working. They learn when they work in different mills and on different machines. Here I will cite one example:—

The Place of Research

You cannot expect a student passed out (from the technical institute) in the year 1920 to have known or read the working of Roto-coner winding machine; but he picks up the working when it is shown to him. In these days when improvement is daily made and new types of machines are brought to the market every year, one has to learn the working of the machines when it is shown to him. In the same way, though a graduate trained up in a particular mill has not the knowledge of the different systems of working of other mills or machines, but has the necessary knowledge of conducting his own department, being conversant with the machine principles, he will not find difficulty in picking up the working of a new machine. One is expected to carry on the daily routine work and not do any research work, which will be entrusted to research institutes which will be financed both by the millowners and Government where anyone interested in any research work will be allowed after he has worked for at least five years in the mills. Research will refer to: (1) machinery and its improvement, (2) yarn and cloth construction, (3) practical difficulties that arise during the course of manufacture.

The research institute will solve day-to-day problems and difficulties that one might come across in the mills. Under very efficient and highly talented staff of the research institute, those who show promise of effecting improvements either in machinery or in the processes will be sent to research institute where they will work under expert guidance and, if they show better results, their work will be appreciated in one form or other, and these people will further acquire in the research institute general knowledge of the other departments or processes, and their place in the industry will be those of technical advisers or if possible they may be absorbed by the research institute on its staff.

Managers

In the case of group No. 5, students after passing higher examinations in commerce will be selected to be trained up as managers. They should be given a general knowledge of each department (spinning, weaving, dyeing, bleaching and stores) and detailed knowledge of the sales, cotton and accounts departments. The period of training in each department will depend upon the ability of the person under training; but in no case should the total period be less than five years; then he will be posted as assistant manager from which post he will rise to the post of a manager.

The standard of the text examination should be sufficiently high to draw out the best of the lot. Every third year the apprentices and assistants should be taken on a study tour of the best mills of the important centres. This study tour will give them an opportunity to come across different systems of working and machines in different mills and also add to their general knowledge. They will come across different people in their line and valuable social contacts will be established.

Every mill will provide for Saturday classes in which apprentices will be given theoretical notes or lectures on purely technical subjects like technology, calculations relating to machine and material, etc.

The above system chalks out fixed jobs for the different types of people. At present a supervisor or a clerk expects to rise to the post of a head of the department or manager (and if he has the necessary influence it is not difficult to achieve this). At present a candidate enters the mill line with or without general or technical education, because there is always before him the tempting example of ordinary persons enjoying the best salaried posts. Under the system sketched above there is sufficient scope to rise for people coming under group Nos. 4 and 5, but people falling under group Nos. 1, 2 and 3, if they show higher ability, they will be given higher grades, and, if they can show improvement in existing machines or processing, they will be given the necessary help to report their processes or improvements to the research institute which will decide the case and will award prizes in suitable cases. This practice will encourage persons in group Nos. 1, 2 and 3 to take an interest in the improvement of machines and processes. Only a limited number required for group Nos. 4 and 5 will be trained up and absorbed by the industry. At present the technical institutes go on training people irrespective of whether they are absorbed by the industry or not and the result is that many either leave their own particular lines or continue to serve in low-paid positions.

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New Not Always Best for Textile Machines

ACCORDING to Albert Palmer, Vice-President and Director of Engineering, Crompton and Knowles Loom Works, Worcester, Mass., U.S.A., new ideas and products for textile machinery are, and will be, available, but they cannot be put into use as readily as the average post-war planner would lead us to believe. For example, magnesium, 66 per cent. as heavy as aluminium and 24 per cent. as heavy as steel and easily formed, has only 22 per cent. the modulus of elasticity of steel and one-fourth to one-third as much tensile strength, so cost might be 12 to 15 times as much for an equivalent part. Magnesium offers some promise to replace certain castings and extensively machined parts where it does not touch cloth (it smudges fabric).

In one case a plastic handwheel was considered to replace a pressed-steel one on looms. Dies would have cost $3,500 and wheels thereafter 50 per cent. more. The solution was a plywood wheel with cast-iron hub and steel rim, at considerable saving in weight and cost. Plastic sheaves for loom dobbies would cost twice the present selling price of wood ones. Plastics could not stand the shock load of pickers either, but a rubber-impregnated material shows a promise. A plastic-impregnated fabric costs more than the fabricated sheet-steel dust cover it was to replace.—*Textile World.*

A view of the newly opened Ravi Varma Hospital

New Hospital for Cochin Textile Workers

Dr. Alagappa Chettiar's Gift

SIR George Boag, K.C.I.E., Dewan of Cochin, opened the Ravi Varma Hospital on 26th March 1945 at the Cochin Textiles Mill premises at Pudukkad, in the presence of a large gathering. Leading officials and non-officials of the State, Rev. Dr. George Alappatt, Bishop of Trichur, Sir R. S. Sarma, Drs. A. Vasudevan and T. S. Duraiswami from Madras and the Hon'ble Mr. T. K. Nayar, Minister to the Government of Cochin, were among those present.

Welcoming Sir George, Dr. Alagappa Chettiar stated that the hospital was one of his long cherished dreams and he was glad to note that it had been realized, thanks to God and the goodwill of all those around him. Sir George Boag was kind enough to lay the foundation for the hospital building about five months ago and it was the speaker's good fortune that he (Sir George) should have requested him to invite him to open the building when completed. Dr. Chettiar also referred to the appreciation shown by the ruler of Cochin in his endeavour, by graciously consenting to have the hospital named after him as the Ravi Varma Hospital. He was also grateful to Mr. V. K. Aravindaksha Menon, Chief Engineer of the State, for his generous and valuable suggestion for the construction of the building. He hoped that the object with which he had constructed the hospital would be fully served.

Concluding, Dr. Alagappa Chettiar announced a bonus of one month's salary to the workers and the staff of the hospital and a one-rupee coupon which could be encashed at the Cochin Restaurant by the workers, in memory of the happy occasion.

Dr. J. Ramakrishna Aiyar read messages received from H.H. the Maharaja of Cochin and from various other gentlemen.

Sir George Boag addressing the gathering, congratulated Dr. Chettiar on the happy occasion. The manner in which the work had been executed within such a short space of time showed the zeal with which Dr. Chettiar had been working on the undertaking.

A group photograph taken on the occasion.

Proceeding, Sir George stated that in his long experience as an Administrator in this country he had opened several buildings and also laid foundation-stones to some. But it had only been given to him here to lay the foundation-stone and also open the building.

The hospital buildings, Sir George remarked, were very beautiful and were really an ornament to the neighbourhood. He hoped that the hospital would be a source of great relief to the people around. He always believed that the preventive side of medicine in public health work was more important than the curative side. He felt that there should be a drive to improve the public health of the locality by improving the conditions in which the people lived. He was sure it would be realized by one and all that Dr. Chettiar was doing much to provide facilities for his labourers and added that all could not be expected to be done by him; and for those who were unable to avail themselves of the facilities provided by Dr. Chettiar, the State should provide facilities. He hoped that the Public Health Department of the State would emulate Dr. Chettiar's example and try to do as much, if not more, to improve the public health of this part of the State.

Indo-Australian Post-war Trade Prospects

(*Concluded from page* 532)

war orders and controls, that the position may be somewhat different.

As for the raw material, Australia to-day has a large wool surplus—chiefly of the lower grades, some of which would suit the Indian market well. These stocks will be released by degrees so as not to dislocate the market and will take several years to clear.

In the reverse direction there appears to be no reason why Indian carpet makers should not find a good market in Australia. To-day carpets are practically unobtainable and a heavy demand is piling up. Moreover, there is in Australia a market for the higher grades of Mirzapore and Amritsar carpets.

Piecegoods and Yarn Merchants' Associations

Federation Completes First Year

WITH the introduction of textile control, the need for a central organization to act as the mouthpiece of the distributing trade was keenly felt. The Bombay Country Fancy and Grey Piecegoods Merchants' Association convened, therefore, in co-operation with other associations, an all-India conference of the representatives of the various cloth and yarn merchants' associations in the country; the conference met in Bombay on 3rd July 1943. It appointed a joint committee of 30 to deal with questions arising from the administration of textile control and empowered it to devise ways and means of safeguarding the interests of the trade. It was also authorized to frame the constitution of the Federation of Piecegoods and Yarn Merchants' Associations of India and to take the necessary steps to put the Federation in top gear so that the conference itself might in due course be dissolved. This joint committee immediately got busy drafting the detailed rules and regulations for the working of the Federation, and the Federation itself was inaugurated in Bombay by Mr. K. M. D. Thackersey, Chairman of the Textile Control Board, on 15th January 1944. The object of the Federation is to readjust the trade to the new situation arising from the introduction of control and to co-ordinate the activities of various associations and take concerted action to promote the integrity and welfare of the trade.

Soon after the Federation was inaugurated a questionnaire was circulated among the member bodies regarding conditions and practices current in the trade at various centres with a view to exploring the possibilities of improvement and uniformity in their methods of business. Before long a small office was, therefore, established and placed in charge of a secretary. Many inquiries from the trade are being attended to day after day, but it is felt necessary to augment the present personnel and raise adequate funds for the purpose if the Federation is to make itself useful by taking up such work as the compilation of statistical surveys, comparative studies of the textile trade in other countries and periodical reviews of marketing conditions.

First Annual Meeting

The following are extracts from the speech delivered by Mr. Gordhandas G. Morarji,

Members of the Committee and delegates at the first Annual General Meeting of the Federation of Piecegoods and Yarn Merchants' Associations of India, Bombay, held on 12th April 1945. The President is seventh from the right in the front row.

Mr. Gordhandas G. Morarji, J.P.

Mr. Gordhandas Goculdas Morarji, J.P., President of the Federation of Piecegoods and Yarn Merchants' Associations of India, has to his credit a distinguished record of activities in diverse spheres of public life. Since 1929 Mr. Morarji has been a member of the Bombay Municipal Corporation. He has acted as Chairman of many statutory and special committees of the Corporation, including the Standing Committee and the Improvements Committee.

He has been a Trustee of the Bombay Port Trust since 1935. He was appointed a Justice of the Peace and Honorary Presidency Magistrate for the city of Bombay in 1937.

He was elected President of the Indian Merchants' Chamber in 1938 and led a deputation of the Chamber to wait upon His Excellency the Viceroy in 1939. The same year he was elected President of the Indian Industries' Association. In 1937 and 1938, he was elected a delegate to the Federation of Chambers of Commerce. He has served as a non-official delegate on the Committee appointed for inquiring into the dispute between Zanzibar Colonial Government and Indian merchants at Zanzibar in respect of the clove trade.

In recent years, organizations of the cloth trade in India have increasingly engaged Mr. Morarji's attention. His association with the cloth trade extends over a period of many years, during which he has held many responsible positions as a representative of the trade. He was elected President of the Conference of Piecegoods and Yarn Merchants' Associations of India held in 1943. He has been Founder-President of the Federation of Piecegoods and Yarn Merchants' Associations of India, which is the premier organization representing the various sections of the textile trade in different parts of the country on an all-India basis. He was appointed by the Government of India a Member of the Textile Control Board in 1944 as a representative of the distributors. He is also a Member of various sub-committees of the Textile Control Board such as the Distribution Committee; the Transport Committee, etc. He is the Chairman of the Bombay Cloth Distribution Panel, which was set up some time ago for the purpose of ensuring regular supplies of cloth to the various deficit areas at controlled rates in accordance with the Provincial quotas fixed by the Textile Commissioner. He is a member of the Bombay Advisory Committee; of the committee for advising the Deputy Director of Civil Supplies, Bombay, as regards fixing the prices of sealed varieties of cloth and yarn; of the committee for fixing the prices of cotton goods entering India from abroad; and of the advisory committee for advising the Provincial Textile Controller, Bombay, in distributing frozen or controlled mills' goods.

President, at the first annual general meeting of the Federation held in Bombay on 12th April 1945:

"Thanks to the efforts of the Bombay Cloth Distribution Panel and the Ahmedabad *mahajans*, despatches of allotted quotas of cloth from manufacturing cites like Bombay and Ahmedabad are regularly made to deficit zones at controlled rates. But the distribution in the provinces leaves much to be desired. In the first place, the provincial and State Governments are clamouring for adequate facilities and staff to cope with the work of controlling grains, cloth, kerosene, petrol and other consumer goods. They have no staff to organize effective controls and the result is that the so-called controls in the hands *of inexperienced Government officials have led* to a state of chaos and confusion in the provinces. Reports regarding favouritism, bribery and corruption are being constantly heard. During my tours in various provinces, I have seen a very deplorable state of affairs at certain places. The time has now come when the Provincial and State Governments, who have pocketed 10 per cent. levy on certain goods of 1943 made under the plea of administration charges, have pleaded their inability to cope with the present-day controls and we do not know why the Central Government should not take over the administration of controls even in the provinces, especially when in most of the provinces, Provincial Governments are run by Governors and their Advisers who are directly responsible to the Central Government.

"The consuming public have always blamed the traders for not supplying their requirements. There is a feeling among them that finer and better varieties of cloth are hoarded, concealed and sold in black market only. To clarify this position, I would like to point out that since some time past, varieties of cloth are not produced according to the indents made by the traders who know the tastes and requirements of the consuming public, but according to the free will of the manufacturers who have only cared to produce such cloth as would only give them better profits irrespective of people's demand. Whilst I appreciate the practical difficulties of the millowners in producing finer and better qualities of cloth and yarn due to non-availability of various materials owing to war conditions, I do not think the industry has reached that stage of helplessness which would prevent them from producing some reasonably fine varieties from Indian cotton which would satisfy at least some requirements of the people and not compel them to use only coarser varieties which are even unliked by the rural population of India.

"Efforts are being made to keep as many dealers as possible in the trade, but if under the circumstances, the new element which has entered the trade in its time of boom has to leave it for the present it will be difficult to help them. The recent policy of distribution through monopolistic dealers adopted by the Provincial Governments has greatly upset the existing trade channels and harmed the cause of proper distribution in the deficit zones. Trade channels which have existed since years, have proved their usefulness and without their co-operation, any system of distribution through inexperienced hands is bound to fail. This Federation has offered to give their full co-operation to all Provincial Governments to organize equitable and just distribution through their member bodies, but their offer is not properly appreciated and accepted by them.

"Want of proper co-ordination between different sections of the control departments and the queer interpretations given by different authorities have often caused great inconvenience, and financial loss to the dealers. Even worse have been the results of arbitrary decisions taken by the control authorities in cancelling and suspending the licences of dealers without giving them any opportunity whatsoever for defending their case. Even the licences of some dealers who have been acquitted have not been restored.

Further Reduction of Prices Possible

"One of the desirable achievements of the Cotton Cloth and Yarn Control Order has been the gradual reduction in prices of cloth and yarn for the benefit of consumers. This has been mainly due to the efforts made in this behalf by the Industries' Committee for which they deserve to be thanked. It has, however, been generally felt that a larger and more liberal reduction could have been possible if it had not been exclusively entrusted to the representatives of the industry alone and if adequate provision had been made for consultation with the trade or Government experts in the matter of reducing prices. An impartial examination of the various process charges fixed by the Industries' Committee would also support the view that a further reduction in prices of cloth and yarn was possible. It is indeed a matter for regret that neither trade representatives nor Government experts have been taken into confidence or given any opportunity of having anything to do with the reduction of prices which has been kept even to this day a close secret in the hands of the industry. Reference may here be made to numerous instances in which disproportionate prices have been fixed in respect of various qualities of cloth to the great detriment of the trade and the consumer.

"While the industry has been allowed to reap large profits to the detriment of the consumer and the benefit of Government, whose tax gatherers they have been the trade has not been given a square deal with the inadequate margins of profits allowed to the trade, but the fact that the industry has paid huge taxes to the Government, fat commissions to their agents and decent dividends to the shareholders and increased their reserve funds several times over will undoubtedly show that their profits were huge and unprecedented and while the wholesalers and retail dealers had to be satisfied with 20 per cent., on ex-mill prices, the manufacturers had a larger share to their benefit.

"The yarn trade of this country is perhaps in a worse position than the cloth trade. The mills have started consuming more yarn than they used to do before. The import of foreign yarn has entirely stopped and in spite of more quantity of yarn being produced in the country, the shortage has been more felt due to larger production of cloth in the country. Owing to shortage of Egyptian type of cotton, fine counts of yarn is produced in very small quantities. The larger demand of yarn for handloom cloth has also accentuated the situation. Owing to no restrictions of price control on handloom cloth, handloom weavers could afford to pay better prices of yarn and that was one of the reasons why rampant black marketing in yarn trade set in at various places and continued to spread in other parts of the country. All this created a very ugly situation for the yarn trade and the Government at last decided to take up the distribution of yarn into official hands. It is necessary, however, that along with the proper distribution of finer and other counts of yarn larger production should be made possible by producing or importing better types of cotton."

Resolutions Passed

The Federation passed a number of resolutions on subjects connected with control and the cloth trade. Among the subjects covered by these resolutions were the demand for larger representation to the trade on the Textile Control Board; the demand for immediate discontinuance of the policy of selecting monopolistic dealers in preference to those of long standing and reputation; speedy release of frozen and controlled stocks; revision in the light of present population figures, of the provincial quotas and the *per capita* allotments ; equalization of sea and rail transport charges ; revision of profits margins, increasing them by at least 5 per cent., amending the Cotton Cloth and Yarn (Control) Order in order to provide for the compulsory granting of bail to merchants prosecuted for contraventions thereof; return of suspended and cancelled trading licences; issue of dealers' licences to commission agents; cancellation of licences for failure to carry on business for three months ; the grant of representation to the Federation on the All-India Handloom Board and the Cotton Textiles Fund Cess Committee.

The following is the text of some of the resolutions passed at the annual meeting of the Federation:—

" This annual general meeting of the Federation is of the opinion that for the purpose of properly regulating distribution of cloth and yarn in the deficit areas, each province or zone should be divided into various parts according to distributing markets existing therein, Zone Central Advisory Committees, consisting of trade representatives, selected preferably from members of associations affiliated to the Federation and Officials of the provincial or State Governments, should be formed and set up and quotas of each sub-division of the province or zone should be allocated by the Zone Central Advisory Committee."

" In view of the limited margins of profit allowed to various classes of dealers and in view of the limited turnover of business made by these classes of dealers, it is not possible for the dealers to pay sales tax, octroi duty and such other local cess, which are unrecoverable from the purchasing dealers in several places under the provisions of the Cotton Cloth and Yarn Control Order. This annual general meeting of the Federation, therefore, urges upon the various provincial and State Governments and local self-governing authorities to appreciate the difficulties of the dealers in this regard and cancel or substantially reduce the sales tax, octroi duty or such other local cess levied by them in respect of the textile goods as early as possible. This meeting further urges upon the Government of India to similarly appreciate these difficulties of dealers and also use their good offices, influence and authority in directing the various Provincial and State Governments and such other authorities to accede to the request of dealers to relieve them from the unbearable burden of these taxes under the present circumstances of the cloth and yarn trade. Failing even that, this meeting requests the Textile Commissioner to allow octroi duty and other cesses wherever they are levied to be collected by the sellers from the buyers."

" This annual general meeting of the Federation regrets the attitude taken up by certain mills in refusing to pay commission to their selling agents and guarantee brokers and asking them to recover the same from their dealers. Under the existing Control Order and the narrow margins of profit allowed to dealers, it is not possible for the selling agents to get anything from the dealers. This meeting, therefore, requests such mills to reconsider their decision in the matter and continue to pay commission to their selling agents especially when the mills still continue to make decent profits. This meeting also requests the Millowners' Association and the Textile Commissioner to look into this matter and to take necessary steps to persuade or compel the mills concerned to pay their legitimate dues to their selling agents and guarantee brokers as they used to do before."

New President and Vice-Presidents

Mr. Gordhandas G. Morarji, J.P., was unanimously re-elected as the President and Mr. Ramnarayan Chellaram, B.A. of Bangalore and Mr. Tricumlal Mahsukhram Shah of Ahmedabad, were unanimously elected as Vice-Presidents of the Federation for the current year.

Fluorescent Lamps for Cloth Inspection

A FLUORESCENT lighting device developed for inspecting fabrics in textiles has increased each operator's daily output by 1,000 yards or 20-25 per cent., and gives improved " quality control." The unit consists of a wooden box 4 ft. x 3 ft. x 1 ft. (1.20m. x 0.90m. x 0.30m.) containing eight 40-watt fluorescent lamps. The face of the box is of opal glass, which diffuses the light so completely it is not possible to tell how many lamps are beneath it. Alternate lamps may be extinguished to reduce the brightness, without causing any noticeable shadows on the glass. Lamps and ballasts are mounted on the back of the box, being easily removable for servicing. Installation is a simple matter of mounting the fixture where wanted. Standing in the " perch " —the machine for unrolling the cloth for inspection—the operator views the fabric as it passes and strings the cloth where defects are seen. It is used for inspecting various types of cloth in the grey and displaces the two former inspection methods—viewing the cloth in a window opening on the north and across a horizontal or flat bed using ordinary lamps. The new device is easily set up in any slanting position.—*Electrical World.*

Glucose in Textile Printing

By Dr. A. M. PATEL, B.A., B.Sc., M. Sc. (Bom.); Ph.D.

(Specially Contributed)

BEFORE the discovery of hydrosulphite for the reduction of vat colours, glucose was very valuable in textile dyeing and printing on account of its pronounced reducing properties. However, on account of the discovery of new synthetic substances such as hydrosulphite, rongalite and the related compounds, it was buried in the depths of oblivion. Nowadays, no one remembers the vital part it once played in the successful application of some of the textile processes. It is probable that the time has now arrived for the revival of its use on account of the fantastic prices demanded for hydrosulphite and rongalite and their inability to cope with the demand during the present war.

India was never a stranger to textile printing. She can be said to be its home. This lost industry has recently gained momentum and many new printing machines have been erected in the various textile centres of India. It is probable that in course of time, India will regain her pristine glory in the application of artistic and beautifully printed designs. Feverish attempts are being made by this infant industry to compete with the foreign imports which are unscrupulously trying to strangle it. Revolutionary changes are, therefore, necessary to vitalize it. Textile printing itself is an easy thing; but it is the efficient organization and the far-seeing and judicious evaluation of the economic aspects invariably interwoven with the technical processes which do not detest either the nationalistic or the rationalistic points of view which will have a sure chance of the final survival. However, it is not the purpose of this article to discuss the main lines of action necessary to organize an efficient textile printing industry.

The purpose of this article is to describe the importance of an innocent substance whose sweetness has been much appreciated by the babes, partly exploited by the elders and grudgingly conceded by the technical people. Chemists have baptised it as " Glucose."

Glucose and its Properties

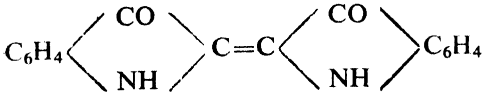
Glucose which is written as $C_6H_{12}O_6$ in chemical symbols and which is commonly known as grape-sugar or dextrose belongs to that group of carbohydrates known in chemical language as Monosaccharoses. It is found in grape juice or in dried grapes. The name " dextrose " is derived from the fact that it turns the polarized light to the right. Glucose can be prepared by the action of dilute solutions of acids on cane sugar. It can be crystallized from its alcoholic solution. On the commercial scale, glucose is manufactured by boiling starch with dilute sulphuric acid until the solution fails to give the blue iodine reaction. This test shows that all the starch has been converted into glucose. The acid is removed by neutralizing with lime and the solution is then evaporated to a thick syrupy liquid.

Glucose is very soluble even in the cold and at ordinary temperatures it dissolves in its own weight of water. It has very pronounced reducing properties especially in conjunction with alkali such as caustic soda. It gets easily washed out from the cloth. It does not deteriorate on storage. As it is odourless, it does not impart any smell to the textile fabrics. It is also hygroscopic in character and as such can replace glycerine in many processes. Where the ageing conditions are not very satisfactory, addition of glucose to the printing pastes greatly helps the fixation of the fast colours. It is also useful in the finishing of the textile fabrics on account of the fact that, besides giving weight, it imparts a mellow feel to the material. Glucose has no vices. It is, therefore, pertinent for us to institute an inquiry into its main virtue—its relatively pronounced reducing property in presence of alkali. Freedom often plays havoc. It is, therefore, necessary to limit its application to the printing of vat dyestuffs.

History of Indigo Printing

Indigo being insoluble in water, requires to be converted into a finely dispersed hydrosol. This is brought about by converting it into its " leuco " form by the action of a reducing substance such as hydrosulphite or glucose in presence of an alkali. It should be pointed out that the presence of an alkali is very important. It is far more essential in those cases where glucose is used as a reducing agent.

Indigo has the following formula:



It is also written as $C_{16}H_{10}O_2N_2$ and its molecular weight comes to 262. The " CO " group under the influence of reducing substances is converted into the " C—OH " group and reduced indigo is formed. This product when treated with an alkali becomes colloidally dispersed. The action of reducing agents on other vat colours is also similar. It should be pointed out here that in dealing with the application of indigo and other vat colours we are directly coming in contact with a system which is highly " colloidal " in nature. To state that the " leuco " compounds are soluble in strong alkaline solutions is to misrepresent a well-known colloidal phenomenon. The reduced colour is finely dispersed in the alkali medium which, in a way, acts as a peptising agent. The dye micelle are negatively charged. Their size and stability are dependent on the preferential adsorption of the hydroxcyl ions from the alkaline solution. The fixation and the subsequent reoxidation of the colour, as also its fastness to various tests, are mainly dependent on the colloidal properties of the dyestuff.

Earlier attempts to print indigo in its reduced form did not meet with success. Yellow orpiment (arsenic trisulphide), caustic soda, lime and indigo were mixed together with a suitable thickening. Fritzsche and Leese used a mixture of indigo, lime, caustic soda and glucose in requisite proportions, printed, dried and steamed the prints for 30-60 seconds in a steam box and oxidized the goods by exposure to air or a passage through a dilute solution of copper sulphate. They also did not meet with much success on account of the rapid oxidation of the reduced indigo during printing. Schlieper and Baum came to the rescue in 1882-83 and pointed out that the trouble could be avoided by padding the cloth in a 25-30 per cent. solution of glucose and printing the dried material with a mixture of indigo and a concentrated solution of caustic soda. During steaming, indigo was reduced and fixed into the fibre. Later on, when hydrosulphite was discovered, Messrs. Lucius and Bruning used it in presence of caustic soda for the reduction of indigo.

In the processes mentioned above, large quantities of caustic soda and the reducing agents were used. The uneven results obtained may be due to the over-reduction of indigo or its instantaneous reduction owing to the high concentrations of the reacting substances.

In view of the above facts and the rapidly soaring prices of hydrosulphite and rongalite and their war-time shortage, attempts were made to modify the above methods. It is presumed that the methods developed will be useful in those cases where the usual reducing substances are not fully available. They will also help in reducing the cost of printing to a certain extent.

Printing Pastes

In the case of soluble dyestuffs, no question arises as to the condition of the colour in the printing pastes. The printer should see that it is in the soluble form and that at the end of the addition of other ingredients, it remains in the soluble state and is not precipitated or coagulated by the interaction of the added substances. If the colour-paste is gradually getting precipitated, uneven printing will be the ultimate result.

The vat colours are insoluble in water. In what form should they be applied to the cloth ? It should be applied in any one form—either in the reduced colloidally dispersed state or in the unreduced but perfectly pasted condition. There is no half-way house. Both the methods are quite satisfactory, if hydrosulphite or rongalite is used as a reducing agent. In the case of hydrosulphite, the colour is first reduced and then applied to the cloth whereas in the case of rongalite, the colour is applied either in the unreduced or partially reduced state.

The preparation of printing pastes requires an intimate knowledge of the nature of the various dyestuffs which the calico printer is called upon to use. Some are dispersed very quickly whereas others require more care in their dispersion and are greatly affected by slight irregularities in the steaming conditions. The preparation of the vat dyestuffs for printing purposes means an extraordinary fine dispersion of the dye micelles in the aqueous medium. The finer the dispersion, the better is the fixation, the tinctorial value and the all-round fastness of the prints. Caustic soda is an efficient peptising agent for the vat dyes and should necessarily be used in those cases where ordinary powder-brand colours are used. The dye-manufacturers have put on the market colours which should alone be used in printing. The pastes, the pastes fine, the powders fine for printing and the suprafix are the brands which are quite satisfactory, the last being the best so far as the fineness and the texture of the dye particles are concerned. However, colours other than those mentioned above can also be used if precautions are taken to reduce them to a fine condition, otherwise the colour yield will suffer and the prints may come out specky and uneven. More of caustic soda and a reducing agent are necessary while dealing with the ordinary powder brands.

The importance of the dispersion of the dyestuff in the printing pastes can hardly be overemphasized. Different recipes are required to be adjusted for the use of colours belonging to the same group. The alkalinity of the medium—mainly its preferentially absorbed negative ions—and the reducing agent play a predominant part in the preparation of the printing pastes. Some colours such as indigo can only be successfully printed in presence of caustic soda whereas others such as the Ciba, Durindone and the other vat colours can be used in presence of either carbonate of potash or soda. The amount of the reducing agent also differs in different cases. However, exceptions are there and they should always be respected; otherwise they may land us in trouble.

The Glucose-Alkali Process

The following is a typical example of the original process of Schlieper and Baum:

(A) *Glucose Prepare.*—250 gms. of glucose are dissolved in 750 gms. of water. The cloth is then padded in the above solution and dried. The impregnated cloth is then printed with the following paste:—

150 gms. indigo 20 per cent. paste.
850 gms. alkaline thickening.

The alkaline thickening is prepared by mixing together

30 gms. maize starch.
100 gms. dark British gum.
870 gms. caustic soda 77° Tw.

and heating them to 140° F. This should be cooled before use.

During investigations, it was found that for the printing of indigo, much less amount of glucose was necessary. No doubt, the quantity varies with the nature of the engraving. It was ascertained that the maximum amount of glucose required for 100 per cent. efficiency of the padding rollers, did not exceed 2-3 per cent. on the weight of the liquor. The following is a general recipe:

(B) The cloth is padded at 100 per cent. squeezing efficiency through:

5—8 lbs. of 40 per cent. glucose diluted with 92—95 lbs. of water. It is then dried and printed with the following paste:

3—5 lbs. of indigo grains 60 per cent. are pasted up with
2 lbs. of Turkey red oil 75 per cent. dissolved in
4 lbs. of water, add
12 lbs. of caustic soda dissolved in
24 lbs. of water.

The total should be made upto 100 lbs. by the addition of starch thickening.

It will be seen from the above that the amount of caustic soda required is only 12.0 per cent. on the weight of the printing paste whereas in the older process of Schlieper and Baum, the quantity rises upto 25—30 per cent. The large amount of the alkaline solution used in the Schlieper and Baum process is definitely detrimental in more than one way. It shortens the life of the back-greys, gives trouble during the after-treatments and is washed out with great difficulty. A large amount of a mineral acid is used to neutralize the alkali contained in the prints. No doubt, it is always safer to work with excess. It ensures success and helps in avoiding little irritations arising out of errors of judgment or an oversight at a critical moment. However, it would be admitted on all hands, that where mass production is not an exception but a rule of the day, changes as enumerated above effect a substantial economy and should not be treated with irreverence.

The process as described above worked very well and gave quite satisfactory results. However, this introduced one more operation. It was, therefore, decided to arrive at a process which would not require the padding operation. This means that glucose instead of being separately applied to the cloth, should be mixed with the printing paste containing the colour. There is a definite danger in this process, as was experienced by Fritzsche and others. It may be that caustic soda and glucose may react and bring about a premature reduction of indigo or the inter-acting substances may exhaust themselves before their time. It was found that in the case of indigo, the reduction took place very rapidly at slightly higher temperatures. Even at room temperature (85° F.), the colour was reduced after a time but the reduction did not proceed beyond the greenish stage and did not interfere with the actual process. Moreover, by adjusting the amounts of glucose and caustic soda, this process gave results which were as satisfactory as the one already described. The following is an example:

(C) 4—5 lbs. of indigo 60 per cent. grains are pasted up with
5 lbs. of 8.0 per cent. glucose solution.
5 lbs. of boiling water are then added. After cooling it to room temperature, add
11 lbs. of 40 per cent. glucose solution followed by
74 lbs. of alkaline starch thickening containing 12 lbs. of caustic soda.

The cloth is printed with the above paste taking care to see that it is kept as cool as possible, dried at a conveniently low temperature, preferably at 120°—140° F. and aged immediately in a rapid ager for three to four minutes.

It should be noted that the above process gave excellent results and the slow reduction of the colour in the presence of glucose and caustic soda did not interfere either in the smooth working of the machine or the yield of the colour. Moreover, by the elimination of the impregnation of the goods by glucose, a substantial saving in time, labour and steam is made.

The above can be modified and made costlier by using a mixture of glucose, and hydrosulphite or rongalite. Here is an example:

(D) 4—5% indigo 60% grains
2.0% hydrosulphite or rongalite
36.0% caustic soda 33% solution
49.0% starch thickening
8.0% 40% glucose.

The above proportions are to be calculated on the weight of the printing paste. Print, dry at 120°—140° F. and age for 3—4 minutes in presence of moist air-free steam, soap at the boil and finish.

Treacle, molasses and jaggery have the same properties as glucose though their reducing power is dependent on their concentration and purity. However, in absence of glucose, they can act as very effective substitutes. They should be evaluated for their reducing efficiency before their proportions are fixed. 25 lbs. in recipe (*C*) or 15 lbs. in recipe (*D*) of treacle gave quite satisfactory results.

Indigo is also printed by reducing it with hydrosulphite or rongalite. 6—8 lbs. of hydrosulphite or an equal amount of rongalite would give quite satisfactory results provided necessary precautions are taken during ageing and the after-treatment of the printed goods. They should be steamed in presence of moist steam and care should be taken to see that the reduction of indigo does not overstep the mark, otherwise troubles are bound to arise.

Blue and Red Style

The blue and red style can be very satisfactorily imitated by the use of glucose-alkali padding process during the shortage of the Variamine Blue Salt B or the Trivasol Fast Blue Salt BB. The different solutions are prepared as follows:

Solution E.—1 lb. of Naphthol As is pasted up with 1 lb. of Turkey Red Oil 75 per cent. and to it are added 1½ lbs. of caustic soda solution 33.0 per cent. The solution is completed by the addition of one gallon of boiling water.

Solution F is prepared by diluting 7 lbs. of 40 per cent. glucose to 2 gallons.

Solution G is prepared by mixing solutions E and F and diluting the whole to 10 gallons.

The cloth is padded in solution F and dried as rapidly as possible at a temperature of 180°—200° F. It is then printed with indigo paste as given in recipe (B) and either with 1—1.5 per cent. Scarlet Base R or 3—4 per cent. of Fast Scarlet Salt R. The printed goods are then aged for the reduction of indigo, soaped, washed and dried. Similarly a chocolate and blue style can be printed by the use of a Bordeaux Base GP or its fast salt.

It should be admitted that during the total disappearance of the blue salts and their shortage, the above method proved very useful to the printing industry of India.

During the discussion, we have confined our attention to the consideration of the older methods of printing indigo advocated by Fritzsche and Leese on the one hand and Schlieper and Baum on the other. Investigations carried out have proved beyond doubt that the proportions of glucose and caustic soda recommended by them were very excessive. The process of Fritzsche did not give satisfactory results because during the mixing of indigo, lime, caustic soda and glucose, the high concentrations of the last two accelerated the reduction of indigo to the yellowish stage from which re-oxidation, if not impossible, is not satisfactory. Schlieper and Baum have also advocated excessive amounts of glucose and caustic alkali. The alkaline solution mercerizes the cloth on account of its high concentration. This, indeed, increases the absorption of the cloth and thereby enhances the fastness of indigo. We are not convinced that such a strength of the caustic alkali is at all necessary. As has been shown above, 12 lbs. of caustic soda are found to be more than necessary for a 3.0 per cent. shade of indigo 100 per cent. powder. The amount of glucose required is also much less. However, the excessive quantities of the reacting substances did not matter in this case because they were not mixed together before printing. Moreover, glucose and alkali were given a very short time to react in the ager. It is presumed that during that time, they did not exert their maximum reducing power and thereby over-reduction was comfortably avoided. This process, therefore, worked quite smoothly and satisfactorily in spite of the high concentrations of glucose and alkali.

The glucose-alkali process can also be applied for the printing of other colours such as the Indigoid (e.g., Ciba, Durindone and Helindone or thio-indigo colours) Hydron and the Anthraquinone vat dyestuffs with a little modification in some cases. The following is a general recipe for the printing of the Indigoid dyes:

(H) 25.0% colour paste.
2.0% hydrosulphite or rongalite.
8.0% caustic soda.
12.0% 40% glucose.

Glucose should be added when the whole mass is quite cold. In the case of some indigoids, recipe (C) can be used quite satisfactorily.

For the highly sulphurised vat dyes such as Hydron Blue R or Indo-Carbon CL, the following works very well:

(I) 2.0 % Hydron Blue R
1.5—2.0% Hydrosulphite or rongalite.
6.0% caustic soda.
12.0% 40% glucose.

In recipes (H) and (I), caustic soda can be replaced by either the carbonate of potash or if plenty of damp steam is supplied, soda ash. In the case of (H), the amounts vary from 8—12 per cent. of the carbonate of potash or 4—6 per cent. of soda ash whereas in (I), half the above quantities works satisfactorily.

In the case of Anthraquinone vat dyestuffs such as the Indanthrene, Caledon and Cibanone colours, the following general recipe gives quite good results:—

(J) 1.5—2.0 per cent. dyestuff pdr.
4—6% hydrosulphite or rongalite or a mixture of both.
10—12% caustic soda.
12.0% 40% glucose.

In this case also, carbonate of potash or soda ash can be used.

It may be mentioned here that in all the above recipes, glucose can quite effectively be replaced by treacle, molasses or jaggery, 20—30 lbs. being generally necessary on the weight of the printing paste. The depth of shade should not be neglected while calculating the quantities of the reducing agents and alkali. Greater the depth greater is the proportions and *vice versa.*

It will be seen from the above that as a rule, in presence of glucose, half the amount of either hydrosulphite or rongalite is necessary. During their shortage and even in peace-time, a judicious use of glucose or the substitutes mentioned above, alone or in combination will, undoubtedly, reduce the cost of printing. Moreover, if caustic soda is used in place of the more favourite carbonate of potash, a further reduction in cost will be introduced, without in the least affecting the tinctorial value of the colours. However, it is a well-known fact that every economic measure requires careful supervision and cautious experimentation.

Ageing

The importance of ageing in calico printing can never be overemphasized. Its non-appreciation has given plenty of irritation to textile printers. The yield of the colour, the brightness of the prints, their bleeding and their fastness to the various destructive factors are mainly dependent upon the successful ageing of the printed fabrics.

In the glucose-alkali process, the goods should be aged soon after printing. If allowed to stay on, most of the caustic soda would be converted into the carbonate and complete reduction may not take place. The temperature of the ager should stand at 101°—102° C. and plenty of damp air-free steam should be assured. It should be remembered that plenty of steam is much more important than the temperature even though the latter should never be disregarded. During ageing, glucose and alkali react vigorously and the colour is reduced and fixed into the fibre simultaneously. Moist steam does help especially in the case of indigo but its importance is a moot point in the printing industry. In case of indigo, over-reduction should always be avoided. If the prints while coming out of the ager are yellowish, they are over-reduced, if greenish under-reduced, and if brownish-olive fully reduced. If fully reduced, the prints come out bright and full colour-value is obtained. If over-reduced, they will be dull, unpleasant and would take a long time to get re-oxidized. If under-reduced, bleeding will definitely take place and the prints will be lighter and unpleasant on account of the unreduced colour being washed out during the after-treatment.

In the case of other indigoid dyestuffs such as the Ciba and the Durindone vat colours, the leuco compounds of which are easily dispersed in less amounts of caustic soda, the troubles due to ageing are not very pronounced and little variations of temperature and volume of steam can be tolerated without perceptible disadvantage.

The drying of the prints after printing and before ageing is important. The printed cloth should be dried, preferably in a hot air chamber, the temperature of which should not exceed 160° F. It should be carried out as rapidly as possible. Prolonged action of hot air causes premature oxidation of the prints and as a result, weak and uneven shades are obtained. If prints are bone-dried, reduction—and fixation—processes are greatly hindered.

Sometimes, on account of the reactions during steaming especially in the case of heavy prints, the temperature of the ager rises above 105° C. In such cases, the temperature should be allowed to come down by stopping ageing otherwise the prints will be over-reduced and their brilliancy will suffer.

After-treatments

The after-treatments of the printed goods consist in their re-oxidation and the washing-off of the ingredients added to the printing pastes such as alkali, starches and other materials of minor importance. When it is remembered that the colour printed on the fibre and fixed into its inter-micellar spaces by processes of reduction and re-oxidation, is insoluble by nature, it will be realized that the rate of reduction and its re-oxidation must play a predominant part in the degree of the different fastness-tests by affecting the size of the resulting dye micelles. However, this problem has not been studied with the care and attention it ought to inspire. It should be pointed out that during the washing process, the dissolution of the leuco compound and its re-oxidation take place simultaneously and the ultimate colour yield will depend on the respective rates of dissolution and oxidation. In order to obtain a better colour value, the rate of oxidation must be greater than that of the dissolution of the reduced substance. This can be achieved by the use of an oxidizing material such as the bichromate of potash or soda either in cold or at 140° F. The quantity varies according to the nature of the colour used as well as the depth of the prints. Other oxidizing agents such as hydrogen peroxide and perborate of soda can also be used. However, it should be remembered that

C

the shades of prints are adversely affected if chemicals are used for oxidation. Some of the Blues become dull and greener in the presence of the bichromate of soda. In such cases, it is better to use the perborate or the hydrogen peroxide. In case of heavy prints, oxidizing agents are necessarily used. However, they can be eliminated in the case of light and medium prints by a judicious addition of the right quantity of the reducing agents. The printed goods can, then, be kept exposed to atmosphere for some hours after ageing. During the time, most of the reduced colour will get re-oxidized and there will be no trouble of either bleeding or the loss of colour-value. In the case of indigo and other indigoid dyestuffs better results were obtained by keeping the printed fabrics overnight after ageing. In the case of the Anthraquinone vat colours, this method seems to work quite satisfactorily in the case of light and medium shades provided that the uneven re-oxidation in heaps is prevented.

Often, the importance of the right amount of the reducing agents to be used with different dyestuffs is not appreciated and a fixed quantity is always prescribed irrespective of either the depth of the design or the nature of the colour used. The success of clean prints and the maximum colour-value are undoubtedly dependent on the use of the correct quantities of the reducing agent and alkali. It is not impertinent to point out here that the dyestuff is costlier than the ingredients used in the printing paste and, therefore, under no circumstances, the loss of the colour-value is pardonable.

The re-oxidation of the leuco compounds has been emphasized because it is the most vital operation in the after-treatment processes of the printed goods. The second operation which consists in the thorough soaping of the printed fabrics brings out the intrinsic brightness of the original colours, increases the purity of the shades and in certain cases, enhances the fastness of the colours to light and chlorine.

Summary

The vital importance of glucose and related substances as reducing agents in calico printing has been emphasized. It has been shown that indigo can be successfully printed by mixing together the colour, caustic soda and glucose. Processes for the printing of vat dyestuffs using glucose and allied substances as one of the reducing agents have been given. Caustic soda has been preferred to the carbonate of potash as an ideal dispersing agent even though its use may entail little irritations.

It is maintained that whatever the processes may be, the ultimate aim of the calico printer ought to be the production of prints which while pleasing the heart and appealing to the eyes will not soar in their production cost. He should not forget the fact that the industry has to face unscrupulous competition with no godfather to bless her in the unenviable hour of her dire distress. It is the combined co-operation of the captains of industry who are not unnecessarily obsessed by the superiority of other nations and who are not afraid to take giant strides in the face of unfavourable and disheartening circumstances and the highly qualified scientific skill which is defiantly progressive that would successfully withstand the terrific and repeated onslaughts inflicted on her by the more powerful and completely entrenched watch-dogs of humanity.

Forecast and Measurement of Crop Yields

EXTENSIVE use of the modern statistical method of random sampling for measuring crop yield per acre, which was successfully employed by the Indian Central Cotton Committee for cotton-yield measurement, is being applied for carrying out province-wide yield surveys of different food crops by the Government of India.

The first experiment in India with this method was carried out in 1942-43 in the Central Provinces for estimating the cotton yield per acre in Akola District, where the area under cotton was about 627,000 acres. It has been now decided to carry out a complete survey of the area under cotton in the Central Provinces, which is estimated to be approximately three million acres. This survey is in progress in all the ten cotton ginning districts of the province. The villages involved in this scheme number 204 and the result of the survey will be the first of its kind in area.

The same method is likely to lead to a considerable improvement in our unsatisfactory position of forecasting yield from the standing crops.

Peroxide Bleach

By T. V. PUNNOOSE, B.Sc., *University of Travancore, Trivandrum*

(*Specially Contributed*)

AMONG the successful competitors of chlorine, Hydrogen Peroxide is of great value as a non-chlorinated oxidizing bleaching agent. It is applicable to all kinds of textile fibres, including the latest synthetic ones, without fear of tendering or degradation. (Compare the chloramine formation of wool with chlorine.)

Bottoming Before Bleaching

A thorough bottoming is the foundation of a successful bleaching. The purpose of a real bleaching agent is to decompose by oxidation, the natural colouring matter of the fibre and render them soluble to be easily washed off by water; after removing the natural and adventitious impurities by preliminary operations. Fort he peroxide bleach, the usual process of singeing, desizing, alkali boiling, are to be conducted first, similar to a standard bleaching process by the use of chemicking liquor. But in the recent continuous peroxide bleach[1] developed by R. H. Chemicals Department of E.I. du Pont de Nemours & Co. Inc. and installed by Renfrew Bleachery[2], the time, labour, and cost of chemicals have been considerably reduced without affecting the quality of the whites.

Properties of Hydrogen Peroxide

The following properties of hydrogen peroxide have to be considered by the bleacher. An aqueous solution of the peroxide is fairly stable in the presence of a small quantity of acid. Sulphuric acid or phosphoric acid is usually added in small quantities to render the commercial product stable. The addition of alcohol, glycerine, barbituric acid, also renders the solution stable. Hydrogen fluoride is also found to be a good stabilizer. When an acid or neutral solution of hydrogen peroxide is heated, it decomposes rapidly; the rate of decomposition rises with temperature. But if the solution is made alkaline with ammonia or sodium hydroxide, decomposition is more rapid at any temperature. Moreover, metals, especially calcium, iron, and manganese act as catalytic agents in the rapid decomposition. Among metals, lead is the least reactive. Consequently hydrogen peroxide cannot be stored in metallic vessels except that of lead.

Its oxidizing action is illustrated by the following reactions:—

$$PbS + 4\,H_2O_2 \rightarrow Pb\,S\,O_4 + 4H_2O$$
$$2\,K\,I + H_2O_2 \rightarrow 2\,KOH + 2I$$
$$H_2S\,O_3 + H_2O_2 \rightarrow H_2S\,O_4 + H_2O$$
$$2\,FeSO_4 + H_2SO_4 + H_2O_2 \rightarrow Fe_2(SO_4)_3 + 2H_2O$$

At the same time it is also a reducing agent, as under:

$$Ag_2O + H_2O_2 \rightarrow Ag_2 + H_2O + O_2$$
$$2KMnO_4 + 5H_2O_2 + 3H_2SO_4 \rightarrow 2Mn_2SO_4 + K_2SO_4 + 8H_2O + 5O_2$$
$$Cl_2 + H_2O_2 \rightarrow 2Hcl + O_2$$

Detection

1. Hydrogen peroxide turns a starch iodide paper blue.
2. It gives a light yellowish orange shade with a titanium salt.
3. It gives a deep blue colour with chromic acid.

Strength of Peroxide

Usually the strength of hydrogen peroxide is stated in terms of the volume of oxygen evolved on heating or by complete decomposition.

$$2H_2O_2 \rightarrow 2H_2O + O_2$$

Commercial peroxide is usually of " 10 volumes " or " 20 volumes " strength, according as it gives off 10 or 20 times its volume of oxygen. Merk's 30 per cent. preparation evolves 100 volumes of oxygen and is known as *Perhydrol.* The exact strength may be arrived at as follows:—

100 c.c. of a 10 volume peroxide give 100 x 10 c.c. of oxygen at N.T.P.

But 16 gms. of oxygen occupy 11.2 litres at N.T.P. (By Avagadros Hypothesis).

So 1,000 c.c. of oxygen at N.T.P. weigh 16/11.2 gms.

But from the equation stated above 34 gms. peroxide give 16 gms. oxygen.

Hence 16/11.2 gms. of oxygen are given by 16/11.2 x 34/16 gms. hydrogen peroxide=3.04 gms. or approximately 3 gms., i.e., 100 c.c. of a ten volume peroxide contains 3 gms. of hydrogen peroxide.

In a similar manner it could be shown that

a 100 c.c. of a 20 volume hydrogen peroxide contains 6 gms. H_2O_2 and evolves 100 x 20 c.c. oxygen at N.T.P., and

100 c.c. of a 100 volume hydrogen peroxide contains 30 gms. H_2O_2 and evolves 100 x 100 c.c. of oxygen at N.T.P.

Hydrogen Peroxide in the Actual Bleaching Processes and its Limitations

It is always advantageous to use a dilute peroxide bath for bleaching, as a very concentrated one loses peroxide more quickly than a dilute one. The volume of the liquor to be used is usually 15 to 20 times the weight of the material, if the bleaching is to be done in the old conventional way.

As the commercial product is usually present with a small quantity of stabilizer-like sulphuric acid, it is to be made suitable for bleaching by rendering it slightly alkaline. The addition of strong alkalies like caustic soda would result in the rapid evolution of oxygen resulting in the loss of the active principle and formation of oxycellulose. Ammonia, sodium silicate and sodium phosphate are the alkalies recommended for the purpose, using preferably phenol red as an indicator since its pH range is from 6.8 to 8.4. Between ammonia and sodium silicate, the latter is preferable as ammonia causes considerable loss of bleaching power due to the decomposition of the peroxide, even though silicate gives a harsh feel to the goods. According to Weber, this objection can be minimized by using 1 lb. of silicate of soda for every 20 gals. of 10 to 20 volume peroxide. Weber's recipe for a 240 gals. standing bath is as follows:—

40 gals. of 12 volume peroxide.
200 gals. of water.
2 lbs. silicate.

The suitable temperature for effecting the peroxide bleach is considered to be 100° F.

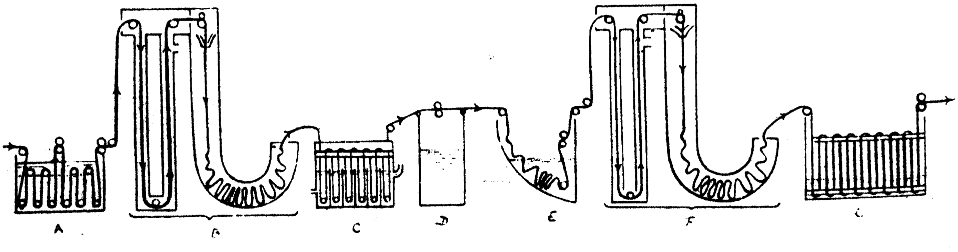
To help penetration of peroxide to fibres, assistants to the bleaching baths like soaps and other penetrating agents could be added.

The rapid decomposition of hydrogen peroxide is prevented by the addition of stabilizing agents, which are usually colloids or materials of a colloidal nature, like sodium silicate, soap, glue, etc. Sodium phosphate, ammonium phosphate and magnesia could also be used for the purpose. Magnesia has an additional advantage that it could be used even at boiling as it forms magnesium hydro peroxide. But whenever it is used, the goods must be soured before the final washing.

If the peroxide bleach is to be conducted in a vat, it must be of suitable wood, slate or glazed bricks, so that no metal can come in contact with the bleaching liquor. Though lead is safe, it causes lead stains, which are difficult to remove. Instead of direct steam heat, it is preferable to use a lead steam coil placed in the vat under a false bottom. For the usual bleaching process the goods are worked in a bath of peroxide at 100° F. for about 2 to 3 hours, the strength of the liquor being ascertained from time to time as described under *evaluation*. It is always better to have a good circulation of the liquor which could be done by the aid of a pump, rather than the normal open steam coil. If any metallic vessel is to be used for the peroxide bleach it should always be painted more than once before the use with a mixture of cement and sodium silicate.

Continuous Peroxide Bleach

Installation of a continuous process for bleaching cotton piecegoods has been made by Powdrelle and Alexande Inc. Danielson Conn.[1]. This was developed by



R & H. Chemicals Department of E.I. du Pont de Nemours & Co., Wilmingbow Del. This equipment is simple and consists essentially of a specially designed heating tube and J-box. The speed is about 100 yards a minute and thus much time, labour and chemicals are saved.

It is also revealed by the du Pont chemists that the fabric bleached by the continuous process is more absorbent than those bleached with peroxide in a kier, and is equal in tensile strength, cuprammonium viscocity, and uniformity, degree and permanency in white. The cost of chemicals is estimated to be about 60 per cent. of that for older methods of peroxide bleaching. It is expected to be suitable for a wider range of fibres too.

Several important modifications of the process have been made by the Renfrew Bleachery,[2] Travellers Rest S.C. as a result of four years' experimental work.

According to the new process, the goods, after singeing and souring (or desizing) and washing, are opened by means of a scutcher and allowed to enter open width into the caustic saturator A which is a cast iron vat of capacity 350 gals. The amount of caustic soda depends upon the nature of the goods, but usually 2½ per cent. on the weight of the goods. The material absorbs 1 lb. of the liquid for every pound of cloth. Next the goods are converted to the rope form and immediately entered into the first heater tube and J-box unit, B of figure. This unit which is the heart of the process is constructed of stainless steel and is insulated on the outside to minimize loss of heat. The tube is filled with live steam flowing counter to the direction of the cloth. The goods pass through the heater into the J-box, where they remain for one hour at a temperature of 205 to 210 degrees F, retained from the steam treatment. This one-hour treatment is said to be equivalent to a lengthy kier boil. Following the caustic and steam treatment, the goods are pulled into a six-strand slack washer C in figure, where they remain for about 8 seconds in each of the several compartments. Squeeze rolls D remove excess of moisture after caustic is washed out.

The peroxide saturator E holds for a desired length of time in a solution of hydrogen peroxide and sodium silicate maintained at 0.75 volume for light goods and 1.4 to 1.6 volume for heavy goods. Here the goods absorb their own weight of peroxide solution and the liquid level in the tank is kept constant. (The pH of this solution must be from 10.2 to 10.8.)

The peroxide saturated goods are then passed into a second heater and storage box F similar to B, the first one. In this heater, the cloth is heated with steam air mixture under controlled conditions, so that the cloth is heated approximately to 200° F. and is kept for one hour in this J-box. Following this is another cold water washing.

In case the result is not satisfactory, a second operation could be repeated with a lower percentage of chemicals.

Labour required for the process is one operative at the caustic saturator who also looks after the first J-box set; and a second operative who looks after the peroxide saturator and a second J-box; and a third operative who divides his time between the two washers.

The machine, as mentioned, saves time, chemicals, and gives 90 to 94 per cent. of the theoretical production.

Evaluation of Hydrogen Peroxide

Dilute the hydrogen peroxide with distilled water so that it may be approximately 0.6 per cent. by weight.

Dissolve 2 gms. of potassium iodide in 20 c.c. of distilled water in a flask and add 30 c.c. of dilute (1 in 2) sulphuric acid to it.

After cooling run in 10 c.c. of dilute peroxide solution to the above flask and allow to stand for a short time.

$$H_2O_2+2\,KI+H_2SO_4 \rightarrow K_2SO_4+2\,H_2O+I_2.$$

The iodine liberated is then titrated with a deci normal sodium thiosulphate solution.

34 gms. of H_2O_2 liberates 254 gms. of iodine

i.e., each c.c. of N/10 sodium thiosulphate corresponds to 0.0017 gms. hydrogen peroxide.

If the result is to be expressed in volume then use the formula that 3.04 gms. peroxide give 1,000 c.c. of oxygen or 1 gm. of peroxide gives 329 c.c. (This method is preferable to the permanganate titration as the peroxide solutions might sometimes contain other bodies which are oxidized by the permanganate).

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[1] *Textile World*, July 1937, page 63.

[2] *Ibid.*, June 1941, page 71.

Simple Weave Combination for New Designs

By ALEX. J. BENNETT

(*Specially Contributed*)

BY the combination of simple weave elements it is possible to produce many new and novel fabric designs; in fact the scope offered by this expedient is almost limitless in its variety. Unfortunately it is not possible to produce fabrics by combining every and any weave without due regard to certain essential factors associated in the practical process of weaving in the loom. The three principal rules controlling the combining of weaves are as follows:—

(*a*) The setting or density of the individual weaves to be combined must be similar; for instance, it would be impossible to weave, say, the plain matt weave in stripe form alongside the 3/3 twill weave in the same reed setting, because for every six threads and picks there would be six intersections of threads in the plain weave, and only two intersections in the 3/3 twill weave.

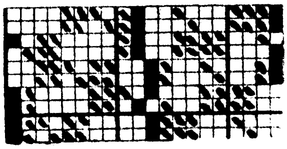
(*b*) The joinings of the individual weaves employed must be good and clear; otherwise long floats of warp or weft are likely to appear and they would mar the resultant effect in the fabric.

(*c*) The shrinkage or take-up of the weaves must be similar– that is to say, in the shrinkage process of finishing the weaves employed must not cause "cockling"; also yarns must be chosen which contain wool of similar shrinking qualities, although they may vary in counts.

The first and third rule mentioned above need careful attention when selecting the weaves it is proposed to combine together; the second rule must be carefully observed when writing out the design on point paper. At all joinings try to obtain clear cuts and, where this is found to be impossible of accomplishment, it may be advisable to insert special threads so as to make the joining clear and eliminate floats of warp or weft.

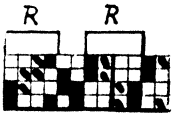
The simplest form of weave combination is that of damasks, and to obtain clear cuts always see that the total number of threads in the straight and reversed sections are equal, or differ by one or more repeats of the ground design utilized.

Design 1 illustrates a typical example of stripe combination in damask weave, showing clean cutting threads inserted (threads No. 1, No. 10, No. 11 and No. 20). The ground weave on 8 threads and picks may be repeated as required.



※ Design 1

Popular stripe effects are secured by the use of hopsack and twill weave, but in order to combine straight 2/2 twill with the hopsack weave and obtain a clear cut joining, it is necessary to reverse two threads at the joining (see Design 2).



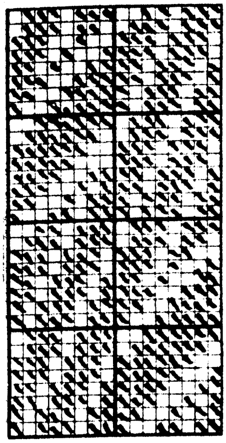
※ Design 2

The first 4 threads bracketed 'R' may be repeated as required, as also the hopsack portion 'R'—threads 7, 8, 9, 10.

Threads marked in black indicate clean cutting threads.

Another method employed to join twill with hopsack is to miss one thread in the repeat of the twill weave resulting in a clear cut joining.

A most effective style of cloth can be made by joining together twills of varying angle. This type of design is known as "entwining twills," which give most effective results. This style of cloth is most frequently employed for ladies' and men's overcoating trade. They are fairly simple of construction although it is necessary, when originating these weaves, to closely watch the joinings to see that there are no excessive floats of warp or weft which may spoil appearance. It is usual, in designing these, to take a simple weave basis as, for instance, the 3/3 twill; run out two or three twills on point paper, then make the move number on the next twills to move up two in each square of the point paper. The twill must repeat itself, of course, to ensure continuity. A good practical example is shown in Design 3—a typical entwining twill weave.

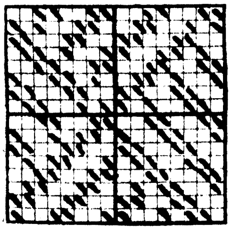


✻ Design III

Here we have, as a basis to start with, the 6/2 twill, with a move of two up on every pick. This is run out on to 32 picks until it repeats itself, commencing on the ninth pick and first thread.

The 6/2 twill is again commenced with a move up of one, so that the ordinary 6/2 straight twill is run in, in the space between the more upright twills. It will be observed that these twills are brought to a point on either side of the base weave twills to give better effect, and also to ensure good joinings. By using varying twill weaves the scope is almost limitless in results.

A style of combination so largely utilized in the fancy and ladies' trade is the class known as basket weaves, or interlaced effects—a kind of check appearing diagonally like a piece of basket work which has been plaited. (See Design No. 4.)

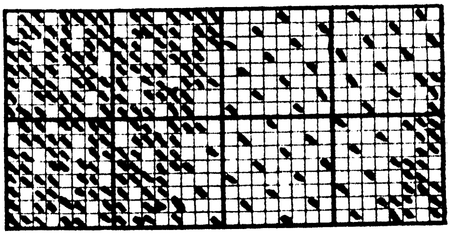


✻ Design 4

These cloths are usually made from twill weaves although other weaves may be introduced in certain portions to secure additional novel effects. To make these designs, first set out an equal number of threads upon which the design is to be completed, then run in lightly in lead pencil a certain number of large twills to the right. Now introduce similar twills to the left across the first twill at one place, but not at the fourth dot in the twill. Make them cross the left twills at one point, but not at the other " 5th." Fill in the remainder ground weave as required.

Sometimes an additional warp or weft spot is introduced just where the point of intersection occurs, but this depends upon the heald capacity of the loom.

Design No. 5 illustrates another style of combination, and in these weaves may be made to run at varying angles. The sett capacity in these weaves is not so important as in stripes and checks, because although the intersections may be different every thread in turn works equally into the fabric. Care must, however, be exercised if large spaces are occupied by the individual weaves, or slack and tight bars will be the result. For best results the designs should have a similar sett capacity in the loom.



✻ Design 5

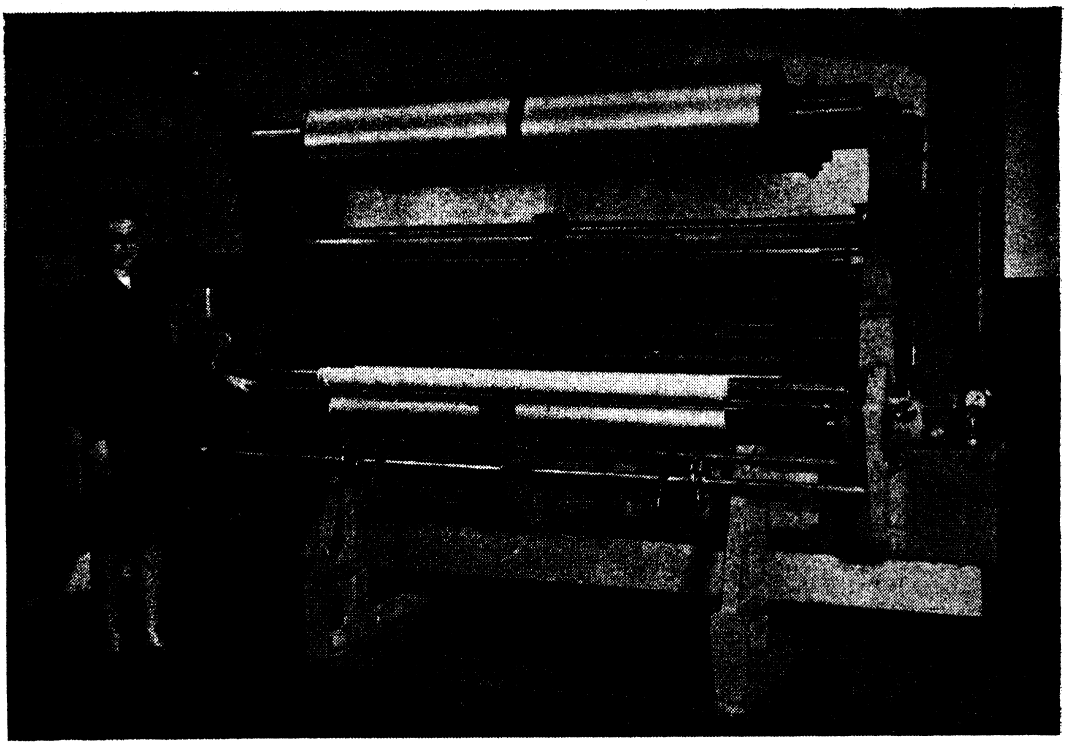
* * *

Britain on the Alert to Regain Markets

AFTER sacrificing a big percentage of her overseas trade for the last six years to increase war production, Britain is now preparing to regain her old markets and to find new ones.

The Department of Overseas Trade has made a survey in 26 countries outside the European battle area as possible markets for British goods. The survey is kept up-to-date and all that will be necessary for action will be cables setting out last-minute instructions.

Passports and *visas* are being expedited by the Government. Hundreds of commercial travellers have already left England to sell goods as soon as they become available. Steps taken recently in London included the appointment of British business men who live abroad as marketing officials in the principal countries. Small firms unable to send their own representatives will be represented by group agencies.



Front view of the Machine

The New F.N.F. Warp Knitting Machine

F. N.F., Limited, with registered offices at Llanthony Road, Gloucester, England, was registered in 1935, all the shares being held by Courtaulds, Limited, and Morton Sundour Fabrics Limited.

The flat warp knitting machine now manufactured by this firm has been working under factory conditions for 12 months at 1,000 r.p.m. in one of Courtaulds' mills.

Although the machine has run at 1,200 r.p.m., it is designed to run at 1,000 r.p.m. at which speed it gives exceedingly satisfactory results. A long useful life is expected for it; all the internal mechanism is fed with oil under pressure.

For some years the bulk of the flat warp knitting machine manufacture has been in German hands and their machines have been found to run satisfactorily at speeds of about 425 r.p.m.

Production and Price

The machine demonstrated will be put into production as soon as possible. Certain alterations will be made in the production model, the only ones of importance to the user being (*a*) a better and more convenient let-off will be provided and (*b*) the needle member will be made out of one piece instead of two.

It is not possible at present to say at what price the machine will be sold, but the price will be such as to be more economical to the user than that of any other existing competitive machine.

The F.N.F. machine requires less adjustment than do other machines. Such adjustments as are necessary require less skill. The fabric quality maintains itself without attention. Waste at the beam ends is less. The needles last longer. A factory equipped with F.N.F. machines would need less labour such as oilers, etc. The stopping marks are less obvious.

Even, Vibrationless Running

While producing a fabric indistinguishable from that knitted on the German and other machines, the F.N.F. machine has entirely departed from accepted practice in many respects, notably by the elimination of the presser, and also of all cams excepting in the pattern box.

In broad outline the machine is similar to the orthodox bearded needle loom, but closer examination reveals important departures in principle and detail.

When the machine is running at 1,000 courses per minute the absence of vibration and noise is impressive. At this speed it runs as evenly as a high-speed sewing machine owing to the complete balancing of the mechanism and to the absence of cams. The main operating mechanisms are completely enclosed, with pressure lubrication to all the main parts. This freedom from noise and vibration gives a false impression of the operating speed, 1,000 r.p.m. seeming more like 300 in an orthodox loom.

The main mechanisms are supported on a very rigid box bed; this has the advantage of making the erection of the machine independent of the floor in obtaining accurate alignment, and maintains complete accuracy of the needle bars, etc. Housed under the bed are the double eccentric mechanisms, giving compound harmonic movements to all the bars. These mechanisms represent an important departure from normal practice, but they impart to the knitting elements an even, vibrationless and accurate motion which is so important to the maintenance of quality over long periods.

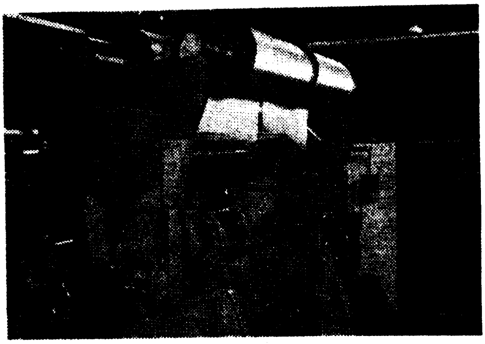
The use of these motions has been facilitated by a novel type of tubular compound needle, which requires less motion than a bearded needle and can be operated by a less intricate and, therefore, more easily obtained motion for high-speed operation. The presser is completely eliminated and the needles are expected to give long-term, trouble-free working. The adjustment of the knitting elements is simpler because of the absence of the presser, and such occurrences as needle beard breakages are eliminated. Owing to war-time restrictions it has not been possible to include the latest needle in the demonstration machine, but the needle in use is capable of producing fabrics in quality equal to the bearded needle, and the new needle will be an improvement on anything so far attained.

Once the machine has been set up, apart from adjustments to the knockover, obtained in the sinker bar, no adjustments should be needed to the needle; and, in respect of the timing of the machine as a whole, none is provided.

Plastic Guide Sections

Another important feature is the plastic guide sections, F.N.F. Limited, being the original patentees of these. Lightness in the guide bars is very important; but in the case of the sinkers a more usual lead alloy casting has been retained, as the sinker has a much more harmonic motion and shorter stroke than is usual in bearded needle machines, with the result that the weight is not so important and, in metal alloys, greater accuracy in the casting of sinkers is obtainable if the important feature of an extremely rigid sinker bar is to be retained.

Much attention has been given to the elimination of the effects of heat in the needle sinker and guide bars, both by convection and conduction through the working parts. This has been amply justified by results. With this machine, long periods at high speed are the normal experience, providing, of course, that excessive and violent changes of temperature are avoided in the works.



Back view of the machine

Yarn Control at High Speed

The warp let-off control is unconventional and has an important bearing on the performance. The cantilever tension bar completely supersedes any other type in performance. Control of the yarn is maintained at the highest speeds. The nip roller let-off gives faultless uniformity of fabric, with no waste on the beams if accurately made, and requires no attention whatever once it is set. It is, however, expensive and the post-war production machine will be fitted with an alternative mechanism that is more versatile and compact yet has all the advantages of the nip rollers. Also the height of the machine will be materially reduced and more convenient for the operator.

Incorporated are the usual controls, such as lifting front bar to facilitate drawing in broken ends with interlocking mechanisms to prevent pressing off the beams through inadvertent turning over of the machine when the bar is lifted. The hand wheel drive is automatically uncoupled and remains stationary when the machine is running under power at any speed. The normal operations of threading in warps, etc., are carried out in the usual way. The spring tension on the guide bars is provided in a novel way· the bars can be easily uncoupled without the strain and risk attendant upon handling heavy springs. From the minder's point of view, the operation of the machine is not different from that of the bearded needle type and, if anything, is less arduous.

Less Than One Fault Per Piece

The warp control is exact. Providing satisfactory warps are made, the quality of the fabric produced is excellent. Over large numbers of pieces the number of faults due to all causes have averaged less than one per piece. Very often over 50 per cent. of the 60-yard pieces of grey fabric produced have been faultless. If desired, the usual stop motions on the warp can be fitted. The machine lends itself to larger diameter beams, carrying upwards of 10,000 yards of warp, with consequent increased efficiency. Because of its increased speed, the F.N.F. warp loom has a lower percentage efficiency at 69 per cent. as compared with 82 per cent. for the bearded needle type under the best conditions. This lower efficiency is the result only of the higher speed in so far that during the inevitable stoppages for replacing warps the lost production of the F.N.F. machine is more than twice that of the slower machine, if the beam diameters were increased the difference in efficiency would be reduced in proportion to the added length of yarn.

With the latest methods of warping, the F.N.F. loom makes it possible for warp knitted fabrics, with all their advantages of versatility and ladderproof qualities, to compete with the products of other classes of knitting machinery.

Mounting Card Fillet

A Patent Power-driving Unit for Mounting Card Fillet on Carding Engines

Dronsfield Bros. Ltd., Atlas Works, Oldham, England

A simple steel detachable transport carriage enables the Dronsfield apparatus to be brought to the card to be covered.

THE clothing of the various organs of the carding machine is important and it should be done in the best manner possible using the most modern appliances as it has a direct and lasting influence upon the quality of work of the card. Careless mounting will be certain to produce poor results in the form of cloudy uneven slivers, charged with motes, nep, and broken selvedges. Badly or carelessly clothed carding surfaces are for the whole period of their existence an annoyance to the carder, good grinding and setting being impossible.

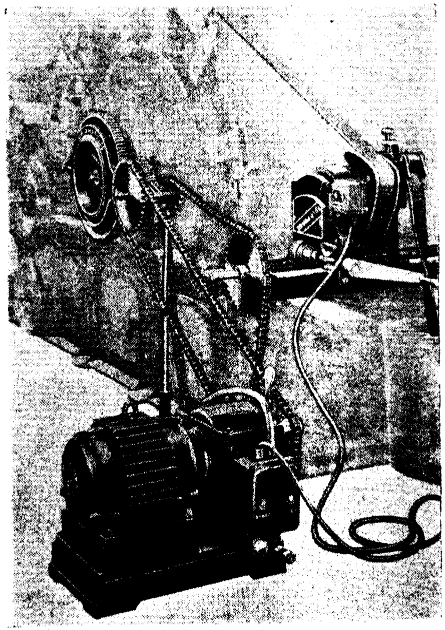
The machine now in universal use for clothing cylinders, doffers, etc., is the Dronsfield's Card Mounting Machine No. 58, with indicating tension apparatus. One important part of the mounting has always been a " bugbear " to those concerned, namely, the method of rotating the cylinder or doffer. Many managers asked Dronsfields for an improvement in the method of turning the cylinder or doffer. Up to the present the rotating of the cylinders and doffers has required three men (more in the woollen trades), working in relays, to turn the handle fixed to the double-purchase jack which is mounted on the cylinder or doffer shaft. It will be seen that to maintain uniform tension has been very difficult. The work is also laborious and necessitates stoppages before the whole face of the cylinder, etc., has been covered with card fillet.

The firm have now solved the problems of manual turning by evolving the patent Power Slow-Driving Unit shown. The standard double-purchase jack is used, but the turning handle is replaced by the chain wheel of the unit. The card nailer controls the starting and stopping of the cylinder by means of a button remote control fixed on the tension head of the card mounter.

The driving unit is placed on the floor near the card and anchored by means of a steel stay supplied. The unit comprises a 1 h.p. motor with a steel triple reduction gear of strong design. The gears run in an oil bath with an oil sight to check up on the oil level. All bearings are self-lubricated from the oil bath. A chain tightener is also provided, so that the chain can be removed without disturbing the anchoring of the unit.

When mounting, the cylinder is driven at about 1½ r.p.m. For the doffer an extra chain sprocket is supplied to give a relatively faster rotation. For taking the unit to the card, a simple steel detachable transport carriage with rubber wheels is provided.

Tests show that the new driving method results in a tension of the card fillet across the whole face of the cylinder much more even than can be obtained by hand turning.



The Patent Power Driving Unit for covering cards automatically at work on a carding engine

New Automatic Winder For Tubular Cops

" Non-Stop " Type, For Jute Industry

PIRN winding machines at present used by jute weaving mills are mostly of old construction and of low productive capacity, although it can be said that the tubular cops produced may be quite satisfactory.

The Schaerer Textile Machine Works, Zurich, Switzerland,* specialists in the manufacture of Non-Automatic and Automatic Pirn Winders, have recently released for sale an Automatic Winder for Tubular Cops, which will greatly contribute towards modernization and rationalization in the preparation of weft yarn in jute weaving mills.

This machine is built in a standard size comprising ten winding units on single-sided frames, each unit working independently of the other. The strong and very precisely built mechanism is totally enclosed in a dust-proof gear case and the mechanism runs in an oil bath. The whole mechanism consists of astonishingly few parts which are subject to very little wear and tear.

The automatic winding principle is based on a revolving system for the spindles, on which the cops are formed. A turret is fitted with three spindles. The winding process starts on one spindle, and when the cop has reached the desired length, the thread is automatically threaded on to the next spindle (second), and is cut after the threading operation has been performed. The full cop remains on its spindle until the second cop is finished and the change for the third spindle takes place. At that moment, the first cop is ejected automatically. The change-over from a full to empty spindle takes place within a fraction of a second, and one can therefore speak of an uninterrupted winding process.

The maximum efficiency will be obtained by using large supply packages, such as have always been customary in the jute spinning industry.

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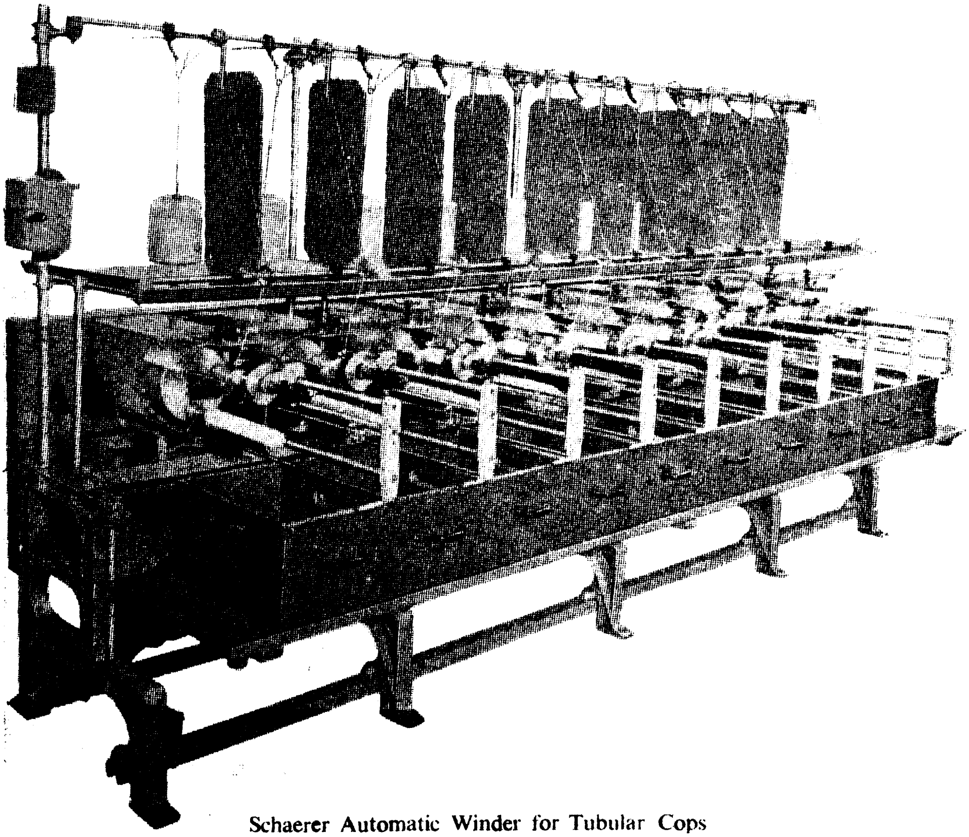
*Represented in India by **Messrs. Volkart Brothers, Bombay, Calcutta, Cochin, Karachi, Lahore, Madras, Ahmedabad and Cawnpore.**



Schaerer Automatic Winder for Tubular Cops

Wool's New Age of Discovery

New Methods of Preventing Shrinkage

By Sir CHARLES McCANN

Chairman of the International Wool Publicity and Research Secretariat

ONLY twenty years ago a distinguished scientist used to tell his students that the structure of wool was so complex that it would never be discovered. To-day, not only have some of the most vital keys been found to the intricate mystery of the wool molecule, but scientists are already actively engaged in perfecting and even improving upon nature's masterpiece.

The full effect of this and its impact upon world trade and industry cannot yet be fully appreciated, but among the more immediate advantages resulting from these discoveries will be a general improvement in the quality of wool, softening of its texture and greatly increased tensile strength and wearing capacity. The struggle with the problem of shrinkage caused by faulty laundering has already resulted in a scientific victory and research has made great advances towards removing restriction in the dyeing capacity of wool and its susceptibility to the ravages of the clothes moth.

But the greatest "experiment" of the present age, and, indeed, of any age, is that which has been created by the present conflict.

Over twenty million men and women serving in the Allied Forces are aiding in the carrying out of a vast "experiment" with wool in a way that has never been done before. Not only is each of them issued with 42 lbs. of woollen clothing and blankets, but wool is to-day being put to an infinite variety of uses never previously conceived to be possible. It might be as a panel filter for an electric motor or generator; or perhaps as a head pad in steel helmets, or as a backing for a map case, or a lining for an ammunition box; or again, as the basic principle of the self-sealing tank, or as a striker-case bearing, or possibly a back-rest for the tank-driver's seat. Parachutists wear knee pads made of wool throughout and in submarines, tanks, and aircraft, wool is found in the capacity of an insulating medium, and also serving as air and oil filters.

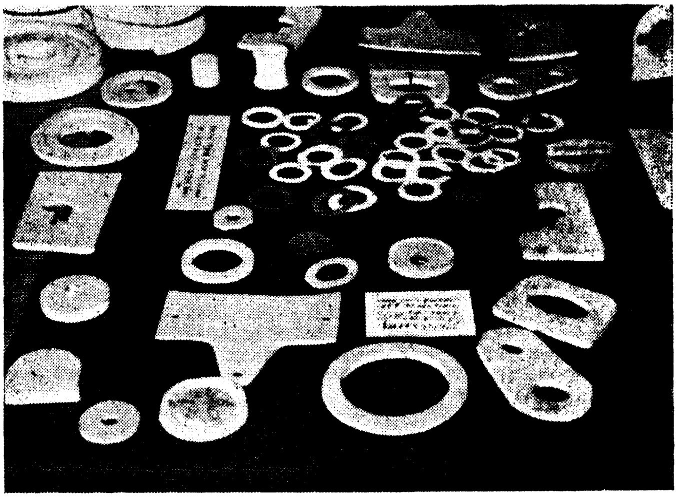
It is because of this sudden and dramatic widening of the domain of wool that there seems some justification in describing it as one of the greatest large-scale "experiments" in textile history. And science is determined that the experiment shall succeed, thus vindicating its hypotheses and adding one more hard-won triumph to its laurels.

Keratin Analysis

Whatever the outcome, there is still much patient research to be done on wool and nature seems determined to foil man in his efforts to reveal the remaining mysteries of the keratin molecule. However, in the past year or two some quite remarkable achievements have been made in discovering the structure of wool keratin as disclosed by its X-Ray spectrum, and more is known to-day than ever before of the essential architectural principles on which this type of protein is constructed. Chief credit for this work

Girls operating spinning machines in a large Yorkshire wool mill must go to a team of English investigators at Leeds University headed by Professors Astbury and Speakman whose exceptional skill made possible the sharpening of the tools of research and the invention of many new ones.

Despite the use of powerful X-Ray equipment which provide photographs of diffraction spectra of great definition, technical skill amounting to genius is needed to make measurements of several hundred-millionths of an inch with any degree of exactitude. For non-technical readers it may perhaps be sufficiently illustrative to add that one of the " beads " of amino acid in the molecule represents in size something like one-millionth of the smallest object visible to the naked eye.



Wool cloth washers for shell fuses and wool felt grommets for army vehicles displayed at an Exhibition in London

Pioneer Work

The first work on wool fibres was undertaken half a century ago by Behrens, who said that wool possessed certain polarising properties. He attempted to relate birefringence directly to wool quality and his researches were entirely promoted with this object in view. Among the first to apply X-Ray analysis to the elucidation of textile fibre structure was Herzog, who published accounts of his work in 1920 and again in 1926.

In Britain, under the ægis of the Wool Industries Research Association, Threadgold examined the wool fibre by X-Rays in both its normal and strained condition. His results were sufficient to indicate a definite structure of wool and showed the need for further research. Ewles and Speakman then pioneered the work to a successful issue. The results of their work fully confirmed the theory already held by Speakman of the gel structure of the wool fibre.

In addition, the nature of the cell wall and fibrillæ in different wools was revealed. The brilliant work of Astbury made possible the development of technique and methods on a much wider basis, with results which have since revolutionized wool research.

String of Beads Analogy

The sum total of their investigation reveals only too clearly the highly complicated structure of the wool molecule. Its complexities can, however, be made intelligible by the use of a simple analogy. Compare the chemical structure of the keratin molecule to a string of beads of different shapes and sizes threaded on a steel wire. In this model, each bead represents an amino acid and the wire the attachment of one to the other. There are some 20 different kinds of amino acid in the molecule and about 600 of them altogether. Accordingly, the molecule has relatively great length. The chain of the amino acids—that is to say, our chain of beads—is folded upon itself at short intervals rather like the " key " pattern common in decorative art. The distance between these folds is about one fifty-millionth of an inch. If a stress or pull is exerted on the chain, the folds are straightened out. On releasing the stress the fold condition is resumed.

We must, therefore, think of the wire on which our beads are strung as having been hardened in the folded position and, therefore, acting like a spring. From each bead in our model we must suppose that an appendage is attached of different size and complexity according to the nature of the amino acid it represents, and these project up or down at right angles to the plane of the folds. It is by means of these appendages that keratin molecules are linked to one another.

By changing our simile, we can summarize by saying that the long molecules of wool are joined together by strong chemical linkages, the whole structure resembling a ladder, the sides of which are the long molecules and the rungs the chemical bridges. These cross-linkages are largely responsible for three of wool's primary virtues, namely, its elasticity, resilience and tensile strength. The linkages are of varying chemical nature and can be broken and repaired by appropriate chemical treatments. Two kinds are recognized, namely, the disulphide cross-linkage of sulphur atoms and the salt-linkage composed of one amino-group and one carboxyl group. The disulphide cross-linkage is the more important since it alone remains unbroken when the wool fibre is made acid or alkaline. It has now been found that both types of cross-linkage can be changed simultaneously by the combined action of bisulphite and methyl bromide or methyl sulphate.

Making Wool Unshrinkable

In case it is thought that these researches are in the main of only academic interest let me summarize very briefly the industrial developments that they have made possible in the past few years.

At the head of the list must come the discovery of the cause of wool shrinkage, the ultimate effect of which will be the saving of millions of pounds of public money. There are now at least 10 new methods available for making wool unshrinkable and the fact that they are all British is probably because research on the molecular structure of wool was pioneered in Britain.

Professor Speakman has just revealed the discovery of an entirely new method, which produces the desired effect by persuading simple molecules to form synthetic resins inside wool fibres. The process introduces a new epoch in the finishing of wool textiles because fibres in which resins have been synthesised are really two fibres in one and by using different resins it is now possible to modify the properties of wool in any manner which the manufacturer desires. It is claimed that the composite fibre is in effect a new textile material, and instead of accepting wool in the state in which it was provided by nature it can now be used to form the basis of an entirely new range of fibres.

Chlorine Treatment

The dry-chlorination method developed by the Wool Industries Research Association of Leeds and registered as the Woolindras Process is generally regarded as being the most satisfactory method of producing unshrinkability in wool by means of chlorine treatment. The process is among those which satisfies the War Office specification and consequently millions of pairs of army socks and vast quantities of underwear have been subjected to such treatment in the past three or four years. Inquiry reveals that the percentage of complaints resulting from garments so treated has steadily dropped from 4 per cent. to 0.5 per cent.

Another great advantage has been the application to wool of an enzyme process which has the effect of giving it a smooth, silk-like texture. The agents used are sodium-bisulphite and papain, the latter being obtained from the pawpaw fruit which secretes a digestive ferment. As well as enhancing its appearance, this treatment removes the " tickle " from wool.

The tendency of certain types of yarns to cause unsightliness due to fluffing during wear or developing beady clusters after laundering has also been overcome by the introduction of a rubberizing treatment. This consists of immersing the hanks of wool in a rubberized solution. The surplus is washed off and the yarn, though gaining considerably in resilience and elasticity shows no subsequent sign of the treatment. The method is particularly applicable to hosiery and other forms of knitwear.

Any mention of the scientific development of wool demands reference to an organization which has played an important part in sponsoring this development. The International Wool Publicity and Research Secretariat came into being in 1937, and has been aptly described as a new experiment in Empire co-operation. Funds are provided by means of a voluntary levy on Empire wool exports, the cost of which is borne by the wool growers. It was realized that the interests of growers, manufacturers, distributors and consumers were bound up together and that it was not possible to promote the interests of one without the other. The Secretariat's aims are, therefore, to promote by scientific and economic research, the very best interest of wool and to make the results of these researches widely known by educational means and by the aid of various forms of publicity.

Instead of endeavouring to set up and maintain its own laboratories with the relatively inadequate resources at its disposal the Secretariat wisely decided to sponsor a programme of long-term scientific investigation at the Wool Industries Research Association, and to establish research studentships at Leeds University, whose work would be complementary to the work carried on at the Association. A fellowship in the biochemistry of wool was also set up at the University of Cambridge, and researches into the hygienic properties of wool were sponsored at the London School of Hygiene, though the entire apparatus here was lost through air raid damage.

Economic research also follows a long-term policy, with special reference to the probable effects of the present upheaval upon post-war commodity values and distribution of supplies. The educational activities of the Secretariat provide the services of a full-time lecturer to visit colleges and schools all over the country and close on 1,000 lectures dealing with the historical, geographical and technological aspects of the industry have already been delivered. Educational literature is also supplied to educational bodies all over the world.

The International Wool Secretariat believes that there has never been a time when the story of wool was more vivid and colourful than it is to-day, and for that reason, it is determined that it shall have the whole world for an audience.

In the difficult period immediately following the war there will be the immense task in Britain of changing over and adjusting the spindles and looms of industry from the unending production of drab Service fabrics to the colourful fineries of peace. But the traditional quality of Britain's craftsmanship aided by the most inspired service that technological science can render will combine not only to restore and rehabilitate the woollen industry but will achieve triumphs greater than ever before, in the supply of world markets.

Labour Welfare Activities in South India

(Concluded from page 584)

numbers coming to the doctor's clinics. The general condition in the villages has improved as a result of the introduction of underground drainage. Women's classes for sewing, knitting and cookery were continued. The management promised to provide training facilities for a larger number of workers in the weaving class if there was scope for employing them. The company deposited 5 per cent. of the total wages of the workers for 1942 and the cash bonus paid in March 1943 in Post Office Defence Savings. Thousands of war bulletins and pictures are being distributed by the management among the workers. The company participated in the War Services Exhibition held at Madras. A scheme of week-end programmes by which parties of 50 men from among the Indian fighting forces stationed in Madras were to be entertained was put into operation. With the funds provided by the management a dozen such treats were held. The programme consisted of tea, games and variety entertainments.—*Labour Gazette.*

Impact of War on Indian Economy

AN able survey of war-time developments in Indian industry and finance, "India Builds Her War Economy,"* examines Government policy critically and makes constructive suggestions for the future. The changes in production and conditions of work in eight large-scale industries, including cotton textiles and iron and steel, are traced in detail, and much scientific light is thrown on such problems as price control and rationing.

"Though it takes," observes Mr. Jain, "a very long time for someone to start a new industry, once a new factory has been set up and there is a reasonable hope of making profits, the industrialists are not slow to crowd in. This happened to our cotton textile and jute industries. First our industries began to suffer from overproduction and excess capacity at very low levels of production. According to the estimate of the Millowners' Association, Bombay, out of 389 equipped cotton mills in India 22 were partially or completely idle in the year ending August 1939. The production of cloth amounted to 4,250 million yards out of which much stock remained unsold. In July 1939 the Southern India Millowners' Association, Coimbatore, decided to recommend to its members the curtailment of production by 50 per cent. of the then output. These facts, says the author, indicate the existence of excess capacity. During the three years 1940-42 this excess capacity has been to some extent reduced, but several of the industries are suffering from it even to this day."

Mr. Jain then proceeds to refer to the "craze for provincial self-sufficiency" in matters of industrial production. Bengal has started many new cotton factories in spite of the fact that more than a score of the existing mills in Bombay, Ahmedabad, U.P. and C.P. have been idle. The economic disadvantage of such a situation, he points out, is that, because of a shortage of demand relatively to the existing equipment, the factories cannot all of them produce at the optimum on most efficient scale so that the costs of production are invariably higher and the competitive power of the industry is to that extent poorer.

The author refers then to the fact that most of the cotton mills in India have suffered from faulty layouts and the use of obsolete and out-of-date machinery. In the post-war boom of 1920 the Indian millowners bought and set-up second-hand machinery which was rejected by Lancashire. The factory layout has been in most cases defective. Lancashire models having been blindly copied without due regard to differences in local conditions; 3- or 4-storeyed buildings, which are most unsuitable from the viewpoint of light, ventilation and humidity, are quite out of place in India.

Unscientific Localization

The location of industry in India, continues the author, has also been unscientific and production has not always been carried on in the most efficient units. There has also been an absence of systematic research and technical training in many of our industries. These backward conditions raise the cost of production, prevent quick increase in output and make adjustments to new conditions difficult.

In these circumstances, the war has given Indian industry a stimulus. This is due to a fall in imports creating a gap in supply which has had to be filled as best as possible by the Indian manufactures. The value of cotton manufactures imported into India was Rs. 1,415 lakhs in 1938-39, Rs. 1,135 lakhs in 1940-41, Rs. 679 lakhs in 1941-42, and only Rs. 137 lakhs in 1942-43.

In addition to the supply gaps created by the reduction in imports, it must be remembered that India has become an important source of supply to Russia, China and the Near East as well as to distant theatres of war. From the outbreak of the war to the end of December 1941 the Supply Department purchased cotton textiles worth Rs. 50.41 crores, woollen materials worth Rs. 17.55 crores and other textiles worth Rs. 28.81 crores. Until quite recently the Government was taking nearly the whole of the output of the woollen industry. With European countries under the German heel and the East menaced by Japan India got a splendid export opportunity, limited only by difficulties of transport and, we may add by the internal demand situation, to capture markets in China, Iran, Iraq, Arabia, Egypt, Afghanistan, the U.S.A. and countries in the British Empire.

Cotton Textile Industry in 1939-42

The year 1939 started with depression, the 1937-38 boom having exhausted itself. Night shifts were stopped in some mills, many looms and spindles became idle and the industry was struggling to keep its head above water. The declaration of war changed the situation. Relying on their experience of 1914-18, cotton manufacturers expected increased prosperity, and there developed a hectic boom in the first four months of the war. Goods changed hands at inflated prices, and production rose. But this speculative boom soon died away as it was not supported by an increase in consumer demand. The basis of speculative activity was the hope of the cotton interests that, as in the last war, the fall in imports will automatically increase the offtake of the mill industry and this hope was soon foiled. Though the speculative boom hope away, the industry did not remain depressed for long and the autumn of 1940 brought increased activity which persisted for more than a year. The industry enjoyed genuine prosperity from September 1940 to the end of December 1941. The year 1942, except for temporary setbacks, brought greater activity and higher profits. Unlike in 1914 when the stimulus came from increased internal demand, the stimulus in 1940 came from huge Government orders and rising exports, while the fall in imports has played only a minor role.

There was, however, a setback in December 1941 and conditions remained disturbed in the first eight months of 1942. Because of Japanese victories in the Pacific, weak holders liquidated stocks, orders from Rangoon, Calcutta and other centres were cancelled and people had a tendency to wait and watch. In subsequent months there was an exodus of labourers from industrial areas owing to fear of enemy attack. Conditions were gradually becoming normal when in 1942 the Indian National Congress launched its civil disobedience movement and work was dislocated. Prices of manufactured goods slumped, night shifts were stopped at some places, and many looms and spindles were forced into idleness. It was with some difficulty that the industry recovered from this great shock.

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* By P. C. Jain, M.A., M.Sc. Econ. (London), University of Allahabad. Published by Kitab Mahal, Allahabad. Price Rs. 3-8.

What of the Future?

The cotton mill industry has doubtless made huge profits during the war but, says the author, we should not repeat the mistake of certain industries which dissipated most of the profits they made in 1914-18 and suffered heavily in the post-war depression. Shareholders, of course, deserve to get a portion of these war profits in the shape of higher dividends, because higher dividends increase the popularity of industrial investments, which is of particular importance in a country like India where capital has long been shy. The worker, too, adds Mr. Jain, deserves bonus payments, partly because their wages are low and partly because these extra payments encourage them to give of their best. The problem of post-war reconstruction, however, has a greater claim on these higher earnings. He exposes the unreasonableness of allocating depreciation funds at pre-war rates. The mill industry has worked at high pressure, mills are working multiple shifts, which depreciates machinery at a very fast rate. A much larger share of profits than normally has, therefore, to be set aside for depreciation, and it is well that Government have appointed a Committee to enquire into the matter. In addition much of our existing machinery in the cotton textile industry is obsolete and out-of-date and, in view of faster depreciation, the only practical course would be to replace the entire lot after the war by new and up-to-date plant. Finally, new technical inventions bring about revolutionary changes in the technical equipment of industry, and the Indian cotton mill industry, if it is to meet successfully competition from modernized factories in foreign countries, will have itself to become up-to-date. All this will need huge funds, and in the interests of the shareholders themselves larger reserves have to be created for the purpose out of the profits now being made.

Necessity for Rationalization

The Indian cotton mill industry must also be fully rationalized after the war. There are far too many small and inefficient units, but the problem of rationalization reduces itself in the last analysis, into one of finance. The war has given us a good opportunity to overcome this difficulty. It is time, says Mr. Jain, that each industry had a central organization strong enough to undertake rationalisation after the war, and all the companies in the industry must contribute to the funds of this central organization which could use them to buy up and close down inefficient units in the post-war period. "The removal of the diseased limb will strengthen, not weaken the industry."

Ready-made Clothes Industry

As to post-war policy rather than rush to set up all types of industry, we should first consolidate old industries. "The Government clothing factories," proceeds Mr. Jain, "do the cutting and get stitching and sewing work done on contract basis by private tailors. We have to continue this work in the shape of a ready-made clothes industry in the future. The work of these private tailors should, therefore, be co-ordinated; automatic sewing and stitching and buttoning machinery should be used so that after the war the mass production may serve civil needs by supplying ready-made clothes at cheap prices."

Small-scale and Cottage Industries

The war has given a welcome stimulus to India's small-scale and cottage industries. The large-scale industries, more especially from the middle of 1941, have been working under heavy pressure in order to supply war requirements. At present it is difficult, if not impossible, to get machinery from abroad and we do not manufacture much of it ourselves. It is, therefore, not possible to expand our large-scale industries beyond a certain limit. As a natural consequence there has been a greater demand on small-scale and cottage industries, especially for the supply of such things as woollen and cotton handloom blankets, camouflage nets, tentage, hats and durries. Another fact is the curtailment of transport facilities due to the war, which has affected large-scale industries adversely. So that in order to supply local demand it has become necessary to produce locally as many commodities as possible. Small-scale and cottage industries, therefore, in spite of high production costs in some cases, provide the only alternative solution.

The Handloom Industry

Spread all over the country there are nearly 2½ million handlooms producing about 2,000 million yards of cotton goods per annum. The woollen industry employs nearly three lakhs of workers and produces 10 million pounds of blankets, 5 million lbs. of piecegoods and 1½ million lbs. of carpets. The industry is concentrated mostly in the U.P. and the Punjab, though it exists in various other parts of the country also.

The war has brought work to the handloom weaver. He has been busy producing *dosuti* or double yarn for tents, bandage cloth, gauze cloth and buntings. The silk industry has been manufacturing parachute silk cloth. The handloom workers have benefited from the war in the sense that their income has increased though their competitive power or future prospects have not improved in any way.

But the handloom industry has been having difficulties in obtaining yarn, dyes and colours. The silk industry has suffered greatly because Japan's entry into the war cut off its main source of raw material supply and has led to a shrinkage of the export market. The woollen industry also has suffered by a fall in the imports of woollen yarn though efforts were subsequently made to overcome this difficulty.

The hosiery industry occupies an important plan especially in the U.P. and Bengal. In Bengal it produces goods worth Rs. 60 lakhs while the U.P. industry produces goods worth Rs. 20 lakhs per annum. The two chief centres of production and distribution are Calcutta and Cawnpore ; though the Punjab also has recently made some progress. Cawnpore is the chief distributing centre in the north while the chief consumer for finer goods is Bombay. Bihar. Assam and Orissa, which have no local manufacture, take only the coarser types.

There are some large-scale factories with capital amounting to Rs. 2 lakhs, but the majority are working on a small scale. The work in the cottage is for the most part seasonal, but factories work more regularly. The industry uses diverse kinds of cotton, woollen, silk, mercerized and art silk yarns and the foremost difficulty facing it is the supply of yarns. The Madura Mills supply fine quality hosiery yarn, but not many mills undertake this work on account of the difficulty of producing double-sized polished thread. Indian mills mostly produce weaving yarn and hosiery yarn had to be imported chiefly from Japan, and a serious difficulty arose when Japan entered the war. As a result many hosiery manufacturers had to close down or work short time. The distribution of the finished commodity also offers difficulties because of foreign competition and lack of organization among the producers. The war has eliminated Japanese competition but the trade is still disorganized and the threat of overproduction, which was present in 1939, might reappear when the war ends. If the industry is to survive post-war competition it should rationalize itself.

Problems Facing Small Industries

So far as research and special training are concerned, the small industries have fared badly. In some cases the quality of production has suffered and in some uniformity of quality has been absent.

It is essential that someone should guide the small-scale producer about the changing tastes of the consumer, the best alternative raw materials and the most economical ways of manufacture. It was only as a result of systematic research that camouflage nets began to be manufactured from sisal hemp in the Madras Province, and the quality and designs of handloom products in the U.P. improved. The Board of Scientific and Industrial Research should take special responsibility for the small-scale and cottage industries. The Departments of Industries in the different provinces have, of course, been highly helpful, though only to a limited extent in matters of research and technical training.

Finally, adds Mr. Jain, most of the small-scale and cottage industries have suffered from overproduction and cut-throat competition, which has, however, temporarily been reduced owing to the demands of war, but might increase in the post-war period. Overproduction may face all these industries and they may have to meet severe competition from foreign producers as well as large-scale producers in the country itself. It is, therefore, necessacy that, in order to safeguard their future, these industries should rationalize themselves. The local co-operative societies, into which all the producers of a commodity in a particular locality will be organized, will be members of a central organization. This organization will decide on price and competition policies and co-ordinate the work of the different co-operative societies. It will also run a sales organization which will find the best possible markets for the output of the industry. The co-operative society will do the work of supervision and will make it possible for the central organization to exercise effective control on the producers. In this lies the future safety of the industry.

Mixtures of Staple Fibre and Indian Cottons *

Spinning Test Reports

THREE Indian cottons, *Jayawant*, Cambodia Co.2 and Surat 1027 A.L.F. and the staple fibre known as Fibro were selected for the purpose of this investigation. The mean fibre lengths of the cottons were 0.92″, 0.84″ and 0.94″ respectively, their fibre weights per inch being 0.182, 0.155 and 0.187×10^{-6} oz., which correspond to 1.83, 1.56 and 1.88 deniers. The staple fibre was exactly 1″ long and 1.5 denier fine. They were spun pure and mixed in the proportions of 10 per cent., 15 per cent., 20 per cent. and 30 per cent. of staple fibre, into 20's and 30's counts (26's for 100 per cent. staple fibre) on machinery suitable for Indian cottons. Pure staple fibre was spun with twist multipliers 2.5, 3.0 and 3.5, while the cottons and the 10 per cent. and 20 per cent. staple fibre mixtures were spun with twist multipliers 3.0, 3.5 and 4.0. The 15 per cent. and 30 per cent. staple fibre mixtures as well as the pure cottons were spun with three drafts in the ring frame 6, 8 and 9 with a twist multiplier 3.5. In addition, *Jayawant* and Cambodia and their mixtures with 10 per cent. staple fibre were spun with twist multipliers 4.25 and 4.5, while 1027 A.L.F. was spun pure and mixed with 15 per cent. and 20 per cent. staple fibre only. The cottons and the staple fibre were examined for their principal fibre properties, namely, mean length, weight per inch, dry and wet fibre strength, fibre diameter and clinging power. The yarns obtained from the staple fibre, the cottons and their mixtures were tested for turns per inch, lea strength, dry and wet ballistic work of rupture, dry and wet single thread strength, and were examined for yarn

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* I. C. C. C. Technological Bulletin, Series A, No. 59. Price: 12 annas.

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evenness and neppiness. The analyses of the results of these tests lead to the following conclusions:—

1. *Fibre properties.*—Staple fibre has a uniform cross-section. Its strength is reduced by nearly 33 per cent. in the wet state, but the distribution of fibre strength is more symmetrical than in the case of cotton. It has a high clinging power with itself, which is reduced to nearly one-half with the cottons used in this investigation. The clinging power, however, has a fairly asymmetrical distribution. *Jayawant* and Surat 1027 A.L.F. are longer and coarser than Cambodia Co.2, which, however, is as fine as staple fibre. Surat 1027 A.L.F. has a higher clinging power and *Jayawant* a lower fibre width than the other cottons. Wetting increases the fibre strength of *Jayawant* slightly, but did not have any appreciable effect in the case of the other two cottons.

2. *Yarn Breakages in the Ring Frame.*—The staple fibre was spun without any breakages, except with the lowest twist multiplier for which the cottons and the mixtures also gave fairly numerous breakages. The addition of staple fibre generally resulted in a reduction of the number of yarn breakages in the ring frame.

3. *Yarn Neppiness.*—While staple fibre yarns were remarkably free from neps, neither higher twists nor mixtures upto 30 per cent. staple fibre showed any appreciable decrease in neppiness as compared with the cotton yarns.

4. *Yarn Evenness.*—The yarns spun from staple fibre were very even, but this property was not shared by any of the mixtures with cottons, either with high or low twists or with different drafts, though the addition of staple fibre helped to make the yarns more even.

5. *Lea Strength.*—The lea strength increased with the twist multiplier in all cases upto an optimum value of the multiplier which was found to be less than 2.5 for the staple fibre, between 4.0 and 4.25 for the mixtures and a little higher for the cottons. These optimum values are in the inverse order of the clinging power of the fibres. Although the lea strength of the staple fibre yarns is rather less than that of the cotton yarns, the admixture of 10—20 per cent. staple fibre with these cottons is beneficial to yarn strength with the lower twist multipliers 3.0—3.5. But with higher twist multipliers 4.0—4.5, or with higher proportions of staple fibre, the lea strength is reduced, the cottons showing a certain amount of differential response in this respect.

6. *Ballistic Work of Rupture.*—The ballistic work of rupture was much greater for the staple fibre yarns than for the cotton yarns. It increased with twist multiplier upto a limit which is higher than for the lea strength. The effect of increasing the proportion of staple fibre on the count work product of the mixtures depends on the twist, the count and cotton. The count work product of the wet yarns spun from the mixture is not only higher than that of the dry yarns, but it is also higher than the count work product of the dry yarns spun from the pure cottons. Thus, the disadvantage of loss of tensile strength, in the wet state, of materials made from staple fibre may be overcome by mixing it with a suitable cotton. Increase in the proportion of staple fibre in the mixture reduced the wet count work product, while the difference between the dry and wet count work product is greater at lower than at higher twists.

7. *Single Thread Strength.*—Increasing the twist multiplier had no pronounced effect on the dry or wet count strength product of the yarns spun from the staple fibre. But in the case of the cottons and the mixtures, the effect of inserting different twists or using different proportions of staple fibre is similar to that observed for lea strength. With low and medium twist multipliers the addition of 10 to 20 per cent. staple fibre is beneficial to yarn strength, while with higher twists and larger proportions of staple fibre there is a tendency for the mixtures to yield weaker yarns, the magnitude of the effect depending upon the cotton and the count. Unlike the ballistic tests, wetting does not always increase the count strength product of the yarns spun from the mixtures, but the effect depends on the twist, the cotton and the proportion of staple fibre. With low twists the difference between the dry and wet tests is large, the wet strength being higher. As the twist multiplier is increased, the dry and wet strengths become equal, after which the wet strength falls off. The wet strength of the mixtures decreases as the proportion of staple fibre is increased. With a twist multiplier of 3.5, the 15 per cent. and 20 per cent. staple fibre mixtures gave a dry strength equal to the wet strength, which was also equal to the dry strength of cotton yarns.

8. *Yarn Strength Irregularity.*—For the cottons and the mixtures the irregularity percentage (which is rather high with low twists) decreases with increasing twists, and is also affected to a lesser extent by the drafts. Staple fibre yarn has a fairly high irregularity percentage in the dry and wet state, the cottons coming next in order. The irregularity percentage tends to decrease with increase of staple fibre in the mixture, particularly in the higher count. The wet irregularity percentage is usually smaller and less variable than the dry value.

9. *Percentage Utilized Strength.*—The " percentage utilized strength " in the staple fibre yarns is nearly half of that observed for cotton yarns; this is probably due to the smaller angle of twist facilitating yarn slippage. The mixtures, with some exceptions, occupy intermediate positions.

10. *Extension Percentage.*—Staple fibre yarns gave large extension percentages in the dry and wet states, which tends to increase with twist. Addition of staple fibre upto 30 per cent. tends to increase the extension percentage in the dry and wet states, wet extensions being usually greater than the dry values. The extension percentage per unit load is fairly high for staple fibre in comparison with cotton.

11. *Effect of Employing Different Drafts in the Ring Frame.*—The effect of employing different drafts 6-8-9 in the ring frame was neither large nor systematic for any of the yarn characteristics considered above. Analysis of variance, applied to the data, showed that a draft of 9 gave significantly lower wet count work product than the other two drafts. In the case of lea and single thread strength, neither the average effect nor the first order interaction for various drafts is significant, showing that employing drafts upto 9 did not have any significant effect on these yarn characteristics.

REVIEWS

Weaving Calculations. By R. Sen Gupta, B.Sc. (Cal.) B.Sc.Tech. (Manc.), A.M.C.T. (With 29 diagrams). Published by D. B. Taraporevala Sons & Co., Taj Building, Hornby Road, Bombay. Price: Rs. 4-8.

Mr. Sen Gupta's book on weaving calculations meets the need now long felt of a cheap and accurate work on weaving calculations. Fully equipped by training and experience, he has described in this work the different methods of calculation derived from fundamental principles, and many of these methods have been illustrated by examples based on data commonly used in practice. Comprehensive in its scope, the book should be useful to the technical staff in a cotton mill, particularly those who require a working knowledge of the different processes as well as to technical students. The author has done well to assume only average knowledge of mathematics on the part of the reader, and the representative samples worked out simplify the different calculations. In the case of important calculations, the author has not ignored even intricate details because they would be found useful in actual practice.

Apprenticeship for a Skilled Trade. Published by Adam Hilger Ltd., 98, St. Pancras Way, Camden Road, London, N.W.1, England. Price: 5*s*.

The proposals for a scheme of apprenticeship set forth in the book under review were communicated by Mr. F. Twyman, F.C.G.I., F. Inst.P., F.R.S., to a meeting called by the Chief Education Officer of the L.C.C. Mr. Twyman is Managing Director of Adam Hilger Ltd. and Chairman of the Technical Optics Advisory Committee of the Imperial College of Science and Technology, South Kensington, London. At the meeting, representatives of the L.C.C. Educational Department, of scientific instrument manufacturers and of the trades unions concerned were present. The scheme was being sent up for the consideration of the Technical Committee of the British Scientific Instrument Manufacturers. The scheme outlined by Mr. Twyman would appear to be perfectly sensible and sound.

An appendix on "Apprentices and the Law" by Dr. Henry Newcome Wright adds interest to the small book.

A Manual on the Preparation of All-India Cotton Crop Forecasts. Published by the Indian Central Cotton Committee, Bombay. Price: 8 annas.

Under the standing orders of the Government of India, five all-India forecasts are prepared, at intervals of two months, in respect of the cotton crop of each season. The prescribed dates of release of each of these forecasts by the Department of Commercial Intelligence and Statistics, Calcutta, are as stated below:—

"First" forecast..	15th August
"Second" ,, ..	15th October.
"Third" ,, ..	15th December.
"Fourth" ,, ..	15th February.
"Final" ,, ..	15th April.

The actual date of release of each forecast, however, depends on the date of receipt of the majority of the Provincial and State cotton forecasts from which the all-India forecast is compiled, after scrutiny. As soon as it becomes feasible to fix a date of release for a forecast, a Press Note announcing the exact date and time of release of that forecast is issued, generally three or four days in advance; and advance intimation is given to the Secretary, Indian Central Cotton Committee, Bombay, and also to the provinces and the Indian States desiring to receive such intimation. On the day and at the hour fixed, the all-India estimates for the current season with their percentage variation as compared with the preceding season, together with figures for the important varieties for the current season, are released *simultaneously* at Calcutta and Bombay (the figures having been communicated for the purpose to the Secretary, Indian Central Cotton Committee, Bombay, a little earlier by 'immediate' telegram). The figures are also handed over at that time to the accredited news-agencies so that the information may be broadcast throughout the country with the least possible delay. Arrangements are also made to telegraph the forecasts to 17 trade centres in India, besides Calcutta and Bombay, which have been selected by the Provincial Governments and Indian States.

The estimates given in each of these forecasts relate practically to the entire cotton tract of India. The first two forecasts deal only with the area under the crop, while the three subsequent forecasts contain estimates of the crop outturn in addition.

An official publication explaining the procedure followed in the preparation of these official cotton forecasts was until recently lacking. The Indian Central Cotton Committee has, therefore, released for publication a manual on the subject, the material for the manual having been prepared by the Department of Commercial Intelligence and Statistics, Calcutta. Explaining the method of framing the estimates of crops, the manual deals with the three factors necessary, viz., the area, the standard normal outturn per acre and the fraction representing the relation of the crop reported on to the normal crop per acre; it describes the various methods of collecting the statistics province by province.

The manual fills a long-felt want and should be useful to the student and the economist.

From the Farmer to the Consumer : A Study of Price Spreads. By M. C. Munshi, M.A. Published by the Research Department of the Federation of Indian Chambers of Commerce and Industry, New Delhi, 1945. Price : Rs. 2.

The Committee of the Federation of Indian Chambers of Commerce and Industry, decided in 1943 that the Research Department of the Federation should be reorganized and appointed a special sub-committee with Mr. G. D. Birla, Sir Shri Ram, Mr. A. D. Shroff and Dr. P. S. Lokanathan as its members. Accordingly, in the following year, Prof. M. C. Munshi of Surat College was placed in charge of the Department.

It has been the object of the committee to encourage research in economic problems and to place the results of such investigations before the people in as simple and understandable a form as possible. Their primary function is not to express their views upon scientific investigations, but only to make it possible to make such scientific work to be done under the most favourable auspices.

The present publication deals with a problem that is frequently alluded to, but not so frequently examined. An attempt has, therefore, been made to relate the shares of the various participants in the price that is ultimately paid for agricultural products by the consumer. It is hoped that the analysis of the problem made in these pages and the effort to put it in its proper perspective, will be welcomed both by the students of the subject and by the wider public outside.

NOTICES

A.S.T.M. Standards on Textile Materials with Related Information. The 1944 edition of the Standards on Textile Materials issued by the American Society for Testing Materials through the work of its Committee D-13 on Textile Materials includes the more than 75 standard specifications, tests, and definitions developed by the Society and in addition, much other pertinent related information such as useful charts and tables, proposed specifications and tests, and abstracts of technical papers.

In the section on standards comprising the major portion (365 pages) of the book, standards on general subjects are given first, such as definitions, requirements on testing machines, tests to evaluate fire-retardant properties, resistance to insect pests, micro-organisms, water, etc.; then the specifications covering specific textiles follow. These cover asbestos, bast and leaf fibres, cotton (the largest section), glass, rayon and silk, wool and others.

Appended material includes a yarn number conversion table and a relative humidity table, a proposed universal yarn numbering system, and a test published for information covering evaluation of the properties relating to the hand of certain fabrics. Abstracts of papers presented in the 1944 Committee D-13 Meeting are included. These cover the Cotton Testing Service ; this service from the view-point of the Breeder : Raw Materials Problems ; Grex Universal Yarn Numbering System ; and Quality Control in the Supply of Textiles to the Armed Forces.

The book includes a detailed subject index. Copies of this 490-page compilation are available from **A.S.T.M. Headquarters, 260 South Broad Street, Philadelphia 2, Pa., U.S.A. at $2.75 each.**

Indian Central Jute Committee, Calcutta : Annual Report of the Technological Research Scheme, 1943-44.

There has been steady progress during the year in the various problems under investigation. The new fine-spinning machinery is now in use. Details of a suitable procedure for spinning trials on small samples have been worked out on lines similar to those adopted for the coarser machinery.

The laboratories have co-operated as closely as possible with the Ordnance Laboratories and the Inspectorate of General Stores, Cawnpore, on various problems of importance for the war effort, including tests on samples of various Indian fibres which might prove suitable substitutes for those now in short supply.

In the physics and testing departments it has been possible to devote an increased proportion of time to fibre testing, as distinct for yarn testing, the twofold objects being, as previously, to gain information of value for scientific grading and for the prediction of spinning quality and yarn characters from fibre characters.

Fresh proposals have been made for the improvement of the existing system of grading.

A large number of samples from Dacca have been subjected to chemical analysis. An investigation of the woollenization of jute by alkaline treatments has been initiated and it is planned to make spinning trials to find out the best method of spinning the woollenized fibre on ordinary jute machinery, using both the coarse and fine systems.

TRADE LETTERS

(From Our Special Correspondents)

Ahmedabad

THE permit system introduced in Ahmedabad on the lines of that working in Bombay is not working as efficiently as the quota system which the local Cloth Merchants' Associations were working previously. Cloth is not moving rapidly to up-country centres, because the permit holders selected by the various Provincial Governments are inexperienced. Stocks have accumulated in Ahmedabad, while consuming centres are experiencing shortage. The Central Government will have to remedy this state if the consuming and producing centres are not to suffer irretrievably.

Mr. Kasturbhai Lalbhai Returns

Mr. Kasturbhai Lalbhai, who has returned after attending the Textile Committee of the Combined Production and Resources Board of the U.N.R.R.A. at Washington, apprehends great shortage of cloth all over the world as a result of a number of European countries ceasing to produce cloth and production in the United States and the United Kingdom having decreased substantially. Shortage of cloth is expected to continue for some time after the cessation of hostilities, and Government will have to be more vigilant in the enforcement of cloth control. The Assistant Textile Controller has promulgated an order in Ahmedabad City for the retail sale of cloth on the ration cards of foodgrains and to the value of Rs. 30 at a time. This has debarred outsiders not holding ration cards from purchasing cloth in Ahmedabad. Ahmedabad, like all other consuming centres, has been allotted a fixed quota of cloth for domestic consumption. Cloth meant for Ahmedabad City has been reserved for the citizens of Ahmedabad only.

The retail merchants of Ahmedabad, however, who were selling cloth to outsiders raised a hue and cry and observed one day's *hartal* as a protest against the loss of business which they have suffered. Merchants have suffered and will suffer if cloth control is to be vigorously enforced, in the interests of the people who have suffered more heavily. If the distribution system is to function properly, the number of merchants which has grown disproportionately with the growth of profits in the cloth business, must be restricted and their business circumscribed. The business of Ahmedabad merchants, if restricted to Ahmedabad City, is more likely to be open and above board. Business has been too much centralized in Ahmedabad, and if it is decentralized it will have a salutary check on black marketing.

After distribution comes production. Mr. Kasturbhai Lalbhai is of opinion that while there are insurmountable difficulties for the United States and the United Kingdom to step up production, India is fortunately in a position to do so if coal or fuel oil can be made available to her. He pressed at the Washington Conference the claims of India for substantial quantities of coal or fuel oil which, he says, are receiving the serious attention of the authorities concerned. Stoppages due to coal shortage are seriously hampering production and adding to the acute shortage of cloth. The scheme of " utility cloth " prepared by Government will step up production to some extent, but it cannot compensate the wholesale closing down of mills due to coal shortage. It is hoped that Government will find the means of relieving fuel shortage for relieving cloth shortage.

Dearness Allowance and Their Future

With the cessation of hostilities in Europe the dearness allowance which the textile workers of Ahmedabad have been getting so lavishly will, it is reported, come to an end. The Millowners' Association has refused to continue it in the manner demanded by the Labour Association in accordance with the agreement reached between the two bodies. The Labour Association has referred the matter to the Industrial Court. The question of bonus was recently similarly raised and referred to the Industrial Court at the intervention of Government.

When the agreement between the Millowners' Association and the Labour Association regarding dearness allowance was made the prospect of the war with Japan was not contemplated and the continuance of dearness allowance for three months after the end of the European war was stipulated if the high cost of living continued. The Labour Association says that the dearness allowance which was based on the cost of living throughout the continuance of the European war, cannot be abruptly stopped while the cost of living continues high, without upsetting the economy of not only the textile workers but of the whole City of which they constitute a principal part. It is regrettable that the millowners who once voluntarily raised the scale of dearness allowance so as to cover practically the whole of the cost of living index are now out to stop dearness allowance altogether without any regard to the cost of living. Workers who are getting dearness allowance twice or thrice their basic wage cannot but be put to great hardships.

Indore

THE distribution of cloth and yarn is still a problem though the position in the local market appears to have greatly improved since last month. The quota of Indore City and the districts has moved into the retail market but bales meant for other zones are still held up with the quota holders. Fine goods from Bombay and Ahmedabad have also moved to the districts but the quota of Indore City has yet to be released.

The State Textile Commissioner has directed the local yarn quota-holders to sell yarn only under his instructions. This appears to be a forerunner to a scheme of planned distribution to the handloom weavers. The Government has invited tenders for the appointment of an organizer who should purchase all yarn requirements of the handloom weavers of the State and arrange for its proper distribution to them. It is further suggested that he should also be responsible for the purchase of manufactured handloom cloth at reasonable prices and market the same.

Some difficulties appear to have been experienced in arranging the distribution of cloth and yarn through the Co-ordinating Officer at Ajmer and, therefore, the question of appointing a similar authority at Indore for Central India is being actively studied. It is generally felt here that such an arrangement would facilitate and expedite distribution.

Supplemented by some extra grants of coal, the local mills worked without interruption last month. The position at other centres in Central India and Rajputana however has deteriorated. The Binod Mills, Ujjain, and the Krishna Mills, Beawar, stopped twice last month due to coal shortage while the Maharaja Shri Umaid Mills, Pali (Marwar) also had to stop for a short time due to the same reason.

The question of bonus, which was under conciliation, has been settled by the Holkar Government, which ordered all the local mills to pay by the 5th May 1945, a bonus equivalent to 2¾ months' earnings during 1944 to all its workers.

It is learnt that His Highness the Maharaja Holkar granted an interview to the members of the Indore Millowners' Association on the 19th April 1945 when they put up their grievances and suggestions in regard to the local excess profits duty. His Highness' decision is keenly awaited.

Calcutta

The Coal Industry in Retrospect

REFERENCE to the Colliery Control Order and its effects on the coal industry was made by the Chairman of the Indian Mining Federation at its annual general meeting. Emphasis was laid by him on the fact that the order created revolutionary changes and that, so far as coal was concerned, free enterprise was a memory of the past. Characterizing the order as an omnibus one, he observed that Grade III collieries had been relegated to a very uncertain position in the schedule of wagon allotments, so much so that at times they had had to face complete starvation as far as wagon supply was concerned. To add to that, there was always the apprehension arising out of the provision of the order authorizing the Government to exercise the powers to close down these collieries altogether. Woeful lack of coordination between transport and output was another weak spot of the industry; when there was plenty of coal there was no wagon for its transport and when there were wagons the production declined and there was no coal to fill the wagons with. The solution, in his opinion, lay in planned production on a rational basis, in which all collieries should be enabled to participate. Referring to the future of the industry, the Chairman suggested that the stability of the industry should be secured and that that could be done by continuing in the post-war period the present system of controlled prices and elimination of confusion and waste by a well-thought-out scheme of rationalization.

The Indian Mining Federation also laid stress on the part the coal industry would play in post-war reconstruction. If in the case of iron and steel 100 per cent. and in the case of cement and textiles 50 per cent. increase in production was contemplated, that alone would need an additional five million tons of coal. It was emphasized that in these circumstances the coal industry must keep ahead of other industrial development and that, if the Government were to set up a committee of inquiry to study this problem, the industry must be represented upon it strongly not only because of the immense investment which the industry would be called upon to make to bring about the necessary expansion but also because of its experience in managing the industry both in easy and difficult times.

Trade and Control Measures

The necessity for the removal, as soon as possible after the war, of the various control measures at present imposed on trade was stressed by the Master of the Calcutta Trades Association in the annual meeting of the Association. Referring to post-war reconstruction he wanted an assurance from the Government that the controls and ordinances would be removed as hastily as they were introduced and that more shipping space would be made available to carry all the goods Britain could deliver to restore normal trading conditions in the country.

Government to Start Spinning Mills

A scheme involving an expenditure of Rs. 60 lakhs has been drawn up by the Government of Bengal with a view to starting immediately one spinning mill capable of turning out 1,400 bales of yarn per month. It is also contemplated to start a number of other such mills. The Government of Bengal claim to have arranged for a supply of 4,000 bales of cotton yarn valued at about Rs. 17 lakhs to the affected fishermen and handloom weavers. They feel that the problem of supply of yarn can be solved effectively by the establishment of spinning mills in Bengal.

A New Share Market

A striking development in the financial field was the starting of the Stock Exchange Association of Bengal in April. The reason for setting up a second share market was, according to the sponsors of the Association, that the Calcutta Stock Exchange Association did not admit the shares of numerous joint-stock companies owned and managed by Bengalis but that the shares of a limited number of selected companies only had a free market on the Exchange. It was further claimed by the organizers of the Association that the new Stock Exchange contained many elements which would enable it to be of larger service to the business community without encouraging unhealthy speculation. For instance, it was admitting the joint-stock banks and other limited liability financial institutions as members—a practice which, though unknown to other stock exchanges, was nevertheless a common matter and established usage with the progressive stock exchanges of the West.

Standard Weights and Measures

The Committee appointed by the Government of Bengal to suggest ways for the introduction of standard weights and measures throughout the Province has submitted its report. The Committee has recommended that the weights as fixed in the Standards of Weight Act, 1939, should be enforced by the Provincial Act in all districts by four stages in an interval of six months from one stage to another and that the Act should first apply to Calcutta, Howrah, 24-Paraganas and then be extended to other districts. It has further suggested that weights not conforming to standard weights should be declared illegal and that the process of replacement of all old weights by standard weights must be completed within two years. For administration of the proposed Act the Committee has recommended the appointment of a staff consisting of one chief inspector, one deputy chief inspector, 27 district inspectors, 105 inspectors and an office establishment at a total recurring expenditure of about Rs. 6½ lakhs per annum.

Jute—Price and Purchase

According to the Indian Central Jute Committee, an agreement has been reached through the appropriate branch of the Argentinian Ministry of Agriculture by which the manufacturers of jute will purchase the crop of nationally produced fibre of the season 1944-45 up to a quantity of 3,000 tons. The prices are believed to guarantee a fair return to the grower in order to encourage him to continue the production of this crop. They have fixed the prices in accordance with officially adopted types, as the adoption of the standard types will facilitate the sale of fibre and the agreement of purchase will permit the grower to receive all the margin of profit which would have been received by others in the process of indirect marketing.

Industrial Disputes

Immediate legislation for setting up a conciliation court for the speedy settlement of everyday labour disputes has been urged in a memorandum submitted to Bengal's Labour Minister by the Bengal Committee of the All-India Trade Union Congress. The memorandum points out the inordinate delay in settlement of the disputes whereby the real interests of the workers suffer. With a view to improving the existing state of affairs it has been proposed that (i) there should be one-month time limits for satisfactory settlement of a dispute by conciliation methods, failing which the matter should be referred to adjudication, (ii) that the adjudicator must complete the inquiry and make his award within one month, (iii) that Government should take all measures to ensure prompt and full implementation of the award, (iv) that the issues for adjudication should be framed only after thorough inquiry and full consultation with the applicant union, and (v) that a suitable panel of whole-time adjudicators should be appointed without delay. It has also been urged that there should immediately be a Conciliation Act for the province setting up a permanent Conciliation Court for the speedy settlement of everyday disputes, the Labour Commissioner having no responsibility other than that of dealing with industrial disputes, and that the Government should commence monthly publication of an official and accurately compiled working class cost of living index for Greater Calcutta industrial area as well as other important industrial centres.

Referring to the criticism about the delay in the disposal of trade disputes, the Labour Minister has stated that of nearly 1,100 cases during 1944, 700 were disposed of, and of the 28 cases referred for adjudication 19 were disposed of. It has been announced by him that two additional Labour Commissioners and certain other staff were being appointed. The Minister claimed that so far as the Government's conciliation and adjudication machinery was concerned, they had been able to secure better wages, dearness allowances and better conditions of service for the workers.

Problem of Short Supply

While Bengal contends that there has been an acute shortage in supply, outside reports are that she has had all that was due to her. A report from Delhi claims that during the five months ended 30th November 1944, Bengal received for civilian consumption 0.4 yard of mill cloth per head more than any other part of India.

In these five months, mills in Bengal produced for civilian consumption 82,152,000 yards or 54,758 bales, while from outside the Province, Bengal received 205,634,000 yards of cloth or 137,089 bales for civilian consumption.

For Bengal's population of 61,581,897 (according to the 1941 census) there was, therefore, a total of 187,786,000 yards or 191,857 bales available, which works out at 4.7 yards per head of the population.

During the same period the total production of mill-made cloth in India available for India's 389 millions was 1,678,098,000 yards, or 4.3 yards per head of the civil population.

Handloom cloth produced in Bengal during the same period is estimated at 66,895,000 yards or 1.1 yard per head. If this is added to the figure for mill-made cloth, Bengal had for civilian consumption 5.8 yards of cloth per head of its population, which is equal to 13.9 yards per head of the population per annum.

Claim for Adequate Supply Refuted

In certain quarters there is a well-defined tendency to assert that Bengal received during the period of six months ending December 1944, more than her quota of cloth. It is argued that during this period Bengal obtained 159,004 bales which, on the basis of 1,500 yards per bale, worked out to 23.85 crores of yards whereas her quota on the basis of 10 yards per head per annum was only 130,500 bales and that since Assam was an independent unit Bengal was entitled to receive during the seven months ending January 1945, 120,050 bales of cloth while she actually received 179,034 bales. Thus, it is said, Bengal received 58,984 bales of cloth in excess, in addition to Bengal's own production of 20,000 bales per month which she was allowed to retain for herself. The Marwari Chamber of Commerce has pointed out that the claim is very much exaggerated. They definitely state that each bale contained not 1,500 but 1,200 yards in practice, which should have straightway increased the number of bales by 25 per cent. Then, on the basis of a two-crore population at least 67,000 bales had gone to Assam which should be written off from Bengal's account. As regards total output in Bengal, the production from mills was 10,000 bales and that from handloom 6,000 bales per month, making a total of 16,000 bales per month instead of 20,000 bales.

Referring to the Delhi figures, the Chamber says that in that report it has been estimated that the population of Bengal is 615.82 lakhs but it is not correct. The estimate has not taken into account the recent influx of people but relied on 1941 census figures. Bengal's population to-day is at least 7 crores and even on the basis of quota allotted by the Central Government the required quantity of cloth in seven months should have been 41 crores of yards, to which must be added nearly 8 crore yards representing the share obtained by Assam for her 2 crore people for five months till 7th November 1944. So, the total quantity comes to about 49 crores yards equal to 408,000 bales. Thus taking the figures of despatches from the producing centres at 179,004 bales and of Bengal's own production at 112,000 bales there has been, concludes the Chamber, a clear deficit of not less than 116,966 bales in seven months, that is, about 28 per cent. Even if for argument's sake, says the Chamber, the contention of Bengal's own production at 20,000 bales and the basis of 1,500 yards per bale is accepted, which calculates Bengal's total requirements at about 327,000 bales, there would have been a clear deficit of 7,966 bales. All these facts have been advanced by the Chamber to point to the hollowness of the assertion that Bengal received more quantities of cloth than her allotted quota during the last seven months.

The statement of the Chamber formed the subject matter of a question in the Central Assembly. In reply, the Commerce Member pointed out that the contention of the Chamber was based on misapprehension so far as the content of a bale and export to Assam were concerned but that the question of allotment on account of increase in population and reduced output from handlooms would be considered by the Textile Commissioner on receipt of authoritative figures of pre-war production and consumption from all mills.

No Relief Unless Supply is Improved

"It is not possible to solve the cloth problem unless supplies are adequate," emphasized Bengal's Civil Supplies Minister in a conference. He protested against the present allotment to Bengal of 10 yards per head per annum, and referring to certain statements issued from New Delhi and Bombay, the Minister said that there had been attempts to create an atmosphere of sufficiency, if not of surfeit, in the supply of cloth and yarn. This was wholly fallacious, he said.

Referring to the basis of allotment to Bengal, the Minister emphasized that the calculations were too naive for words and analysed the figures to bear out his contention. He was emphatic that the yardage per bale was not 1,500 but much less, and from personal experience he could say that an average bale contained 1,150 yards. That was not all and there was another fact to show the fallacy of yardage and bales. It was a matter of regret, he said, "that our merchants had been compelled to import cloth of a variety which was not used in Bengal. We had thus got unwanted cloth and the yardage was increased at the expense of the width." He feared that the process was continuing. Several Bombay mills that used to supply cloth directly to Calcutta refused to do so after the bombing and insisted on supplying cloth at Bombay. This was now frozen by the Textile Commissioner and instead of being allotted to Bengal was sent to other provinces. According to the information supplied to him by the trade, the number of *dhotis* and *saris* that used to come in Bengal had been substantially decreased. Moreover, the total yardage included commodities such as bed-sheets, towels, table covers, napkins and mosquito curtains. He would leave out of discussion for the time being the effect of inflation on demand. Where there was inflation and shortage of consumer goods evil consequences were bound to follow in the best regulated province. We had, he said, inflation on the one hand, decrease of supplies on the other, and not more than 6¼ per cent. of fine goods to meet the demand. He would, therefore, maintain most vehemently that however much and however well we might control distribution, the shortage would be felt and acutely felt unless supplies were increased and the Government of India treated the Government of Bengal a little bit more justly and generously.

Shortage of Yarn

Scarcity of yarn and lack of equitable distribution and supply to weavers is an important factor in determining the cloth situation in the province, says a Press Note issued by the Committee of the Calcutta Yarn Merchants' Association

Thousands of handlooms have become idle owing to the limited supply of yarn which also lacks equitable and speedy distribution. For the last six months or so, the yarn dealers had no hand in the distribution of yarn and if there has been any maldistribution, black market or other unsocial activities, the merchants cannot be blamed.

The Committee urges that the whole system of distribution should be revised so that whatever supply is available may be equitably distributed to ease the yarn and cloth scarcity in the province.

Government on Yarn Position

According to Bengal's Civil Supplies Minister, the position of yarn is not encouraging at all. He says:—"Bengal is supposed to produce 154 million yards through its handloom weavers. It is on this basis that the cloth requirements of Bengal are assured. Calculating on the basis of production of 4½ yards per pound, a little over 7,200 bales would be required for weavers only. Whether the calculation is justified or not depends upon the counts, and the allotment to Bengal has been made mostly in the coarser counts, which produce less yardage per pound.

"We are now controlling all the yarn coming into Bengal and are distributing it to the non-spinning mills, to the weavers in accordance with the looms as assessed by the Fact Finding Committee, to fishermen and to miscellaneous fabricators. The allotment is by no means satisfactory, but since we have taken distribution in our hands, there is not that general cry of shortage which had assumed such large proportions a little while ago.

Standard Cloth and Government's Loss

The total yardage of standard cloth supplied to Bengal from 31st December 1943 to 31st December 1944 was 169,880,377 yards and from 1st January 1945 to 15th February 1945 was 9,596,871 yards. It is reported that the value of the standard cloth received by the Bengal Government in 1944-45 was Rs. 5.72 crores and that the receipts and recoveries of capital accounts was Rs. 4.50 crores. The net loss of the Government in the deal was Rs. 122 lakhs.

Cloth Rationing in Bengal

The Government scheme of distribution of cloth in Calcutta before the introduction of full-fledged rationing was explained by Mr. P. J. Griffiths, Director-General of Enforcement, and Mr. W. S. C. Tully, Director-General of Consumer Goods.

It was indicated that full-fledged rationing of cloth was expected to come into force shortly, and that Government hoped to be able to give each individual over the age of 12 a ration of two *dhotis* or two *saris* or seven yards of cloth (the equivalent of two shirts) for clothing purposes each year. But, approximately one-twelfth of the population would have to wait 11 months for their first ration. It was announced that for the purpose of assisting them in the matter of distribution of cloth in Calcutta in the interim period Government were setting up 200 representative local unofficial committees all over Calcutta. One of the functions of these local Civil Supplies Committees would be to determine the priority needs in the period between now and the introduction of the ordinary non-priority system of rationing of cloth.

At the back of these local Civil Supplies Committees, Government have set up a Central Calcutta Civil Supplies Advisory Committee which is composed of representatives of all political parties and interests.

Rationing of cloth would at present relate only to mill-made cloths. It was the intention of Government, however, to have control over handloom cloth as soon as possible. Government have not as yet come to any decision as to what should be the amount of ration so far as children under 12 are concerned, nor have the Government as yet been able to decide as to what they should do in regard to distribution of ready-made garments when rationing is introduced.

Textile Commissioner Criticized

Trenchant criticism has been made in the local Press of the observation made by Mr. Vellodi to the effect that to describe the present state of supply of cloth or yarn in Bengal as famine was unwarranted by facts. In a leading article, the *Statesman* asserts that Mr. Vellodi's assessment is manifestly that of a man enmeshed in red-tape, imbued with departmentalism. " His argument," continues the *Statesman*, " may be summarized thus: Handloom cloth is available, but its price is beyond the reach of the poor. Mill-made cloth is available in the harassed province but ' at the moment ' is ' badly distributed.' But actually how much is there, and who precisely knows ? Is it enough eventually to go round ? If not, how will the basic deficiency be met and when ? It is Mr. Vellodi's view that the wealthier classes, estimated at a third of the populace, will not be much troubled if they buy no cloth at all during the next six months. Maybe; but shirts wear out, *dhobis* do not grow lighter-handed. In any event it is for the much distressed remaining two-thirds that we speak and plead. With extra supplies lately sent to Bengal, the amount now nominally available is 12 yards per head instead of 10 yards. Supply at this rate is apparently guaranteed for two months and may be made permanent. If not, it amounts to an extra annual allotment of only ½ yard per head or, if available to poorer people only ¼ yard. That can by no stretch of language be called munificent.

There has been talk about equality of sacrifice between provinces. Is the suggestion appropriate to a province recovering from the after-effects of a famine unparalleled in modern Indian history, now ravaged by fresh onslaughts of disease, and, moreover, a major war-base—a hard unavoidable military fact which necessarily brings extra hardships, imposing unwonted drains on its not too plentiful resources. A complete cloth rationing scheme, Mr. Vellodi said, was being worked out. Bengal officials have also said as much. The problematical future results of such working are no answer to present actual shortage of supply. Mr. Tully showed two weeks ago how little would be left for distribution—less than 6 yards per head, and that after an eleven-month wait for many. The proclaimed outcome of Mr. Vellodi's visit was abolition of any " disagreement between the Centre and the Provincial Government." Whether absence of continued disagreement signifies practical public advantage or mere growth of fresh complacency is problematical. Mr. Vellodi came to Bengal with commendable expedition. If, however, the impressions he has carried back are only those set forth in his statements, those multitudes in Bengal who clutch exiguous tattered garments round their unexpected nakedness will be but little benefited."

Textile Commissioner in Bihar

" A controlled distribution of the mills' productions will be shortly introduced in the production centres and this system surely would improve the cloth situation in the country," said Mr. N. K. Vellodi, Textile Commissioner, Government of India, at a Press conference at the Patna Secretariat. Replying to the charge that some provinces have secured even three times the quota, Mr. Vellodi said: " That is because of the absence of control at the production centres where buyers could get cloth at black market rates, but things have improved in Bombay with controlled distribution, and there the quota holders from different provinces got the cloth. The system will be introduced at Ahmedabad and be extended to Cawnpore, Delhi, C.P., Indore and Sholapur in the near future. Bihar's quota of 17,800 bales in a month, he felt, would be increased and he promised to look into the matter.

Referring to the shortage of yarn for which handlooms were lying idle in the province, Mr. Vellodi announced a scheme of distribution had been made which was likely to ease the situation. According to the scheme, mills will be directed to send straight to the provincial buyers who will be nominated by the Provincial Government. The present quota for Bihar was 3,800 bales which he promised to increase.

Cloth Rationing in Patna

As an emergency measure to meet the cloth situation in Patna, Government decided that all sale of cloth in the urban areas should be controlled and made available to people through the rationing machinery.

A Press Note announcing this says that requests from either officials or non-officials for supply of cloth for themselves or for their dependents or for special treatment of any kind will be entirely disregarded. Some *ad hoc* allotments were made in the initial scheme of distribution to various institutions and offices in Patna.

Cawnpore

Acreage Under Cotton

OWING to the intensive "Grow-more-food" campaign inaugurated by the Government, acreage under cotton in the province (which is mostly of a short-staple variety) has gone down almost by 50 per cent. On the basis of reports of crop estimates compiled by the Government it is found that the acreage under cotton in the province was about 264,000. But according to returns received from a majority of the districts. and advance statements from the rest, the total area under cotton is only 202,927 acres as against 372,361 last year, showing a decrease of 169,434 acres or 45.5 per cent. Compared with the average area of the previous five and ten years, the area for the year under report (1944-45) shows a decrease of 55.3 and 64.0 per cent. respectively.

Progress of Co-operative Movement

The working of the co-operative organizations in the province once again made rapid strides. The total number of societies of all kinds rose up by nearly 100 per cent. and their membership increased by 1.45 lakhs, working capital by Rs. 41.53 and owned capital by Rs. 24.99 lakhs which was nearly 50 per cent. the working capital.

Post-war Reconstruction Plans

The Government of the U.P. have issued the blue-print of their "Post-war Reconstruction and Development Schemes." It is an ambitious affair, envisaging a Five-Year Plan, and comprising 191 schemes and involving an approximate total cost of Rs. 114.18 crores. The development activities contemplated in the plan, it is argued, will progressively increase the national wealth on which expansion of Government revenue will ultimately depend, and it may be presumed that the Provincial Government will tap every new source of revenue to raise the requisite finance. Irrigation, communication, hydel schemes and large building schemes are to be financed from loans. The Provincial Government, it may be observed here, have already built up reserve funds for expenditure on post-war schemes to a total of over Rs. 13 crores. Out of the Rs. 114.18 crores which is the target for the first five-year period (capital expenditure, Rs. 86.31 crores; and recurring expenditure, Rs. 27.87 crores), public works is the biggest commitment involving Rs. 60.27 crores. Industrialization of the province also received sufficient attention. "There must be an adequate expansion of industries in the province and in fact industrialization is necessary to remedy the present lopsidedness in the country's economy. Both for the purpose of relieving pressure on land and solving the problem of unemployment among the educated youths, large-scale industrialization is desirable. The importance of cottage industries has been recognized and schemes for fostering them, making a useful link between cottage industry production and organized industries, have also been proposed. Various suggestions have also been made for the purpose of starting small-scale industries or assisting those who start small-scale industries through the establishment of co-operative producers' societies, inspection depots for grading and standardizing, enlargement of marketing facilities as also the supply of cheap gas to these institutions for effecting cheap and efficient production.

Trade with Australia

Lala Ramratan Gupta, M.L.A. (Central), Managing Director of the Laxmi Ratan Cotton Mills, and member of the Indian Trade Delegation to Australia, who returned last week, interviewed, said that during his two-and-a-half months' stay he had occasion to study things at close quarters and had come to the conclusion that the "shortages of Australia and India are complementary, and what one needed, the other could supply." Speaking of the industrial progress made by that country, he said that they had made marvellous progress. They were now manufacturing good aeroplane parts and other complicated things and can sell them 50 per cent. cheaper than England or America. Turning to the labour problem he said that Australian labour was fully organized. It was contented and enjoyed very high wages, that ranged from £5 to £7. He concluded: "I think our tour has been very successful. Australia is a place which gives enough material for Indians to study, and we can certainly emulate their example with great advantage."

South India

Government Textile Institute

THE Government of Madras have transferred the control of the Government Textile Institute, Madras, from the Provincial Textile Commissioner to the Director of Industries and Commerce.

Distribution of Artificial Silk Yarn

The Provincial Textile Commissioner, Madras, has issued a Press statement pointing out that the Central Government have appointed the Provincial Textile Commissioner, Madras, to be ex-Officio Deputy Controller General of Civil Supplies for the Madras Province in respect of artificial silk yarn.

Supervisors for Cotton Ginning

The Madras Government have appointed eleven demonstrators to supervise the work of ginning in the Tadpatri, Guntakal, Bellary and Adoni areas.

Sericulture Industry in Madras

During the year, says the Madras Administration Report for 1943-44, the establishment of a central grainage at Kollegal and of a seed farm at Hosur were approved with a view to enlarging the work relating to the production and distribution of high grade disease-free seeds to the silk-worm rearers. Progress was also maintained in the production of silk required for defence purposes at the two silk filatures in the province.

Cotton Yarn Distribution

A meeting of the Southern India Millowners' Association was held on 3rd April at Coimbatore, Mr. R. K. Kandaswami presiding, when the question of distribution of cotton yarn from the surplus to the deficit areas was discussed.

It was resolved at the meeting that the mills be requested to make every effort to increase their production by at least one-seventh by either reducing the average count or increasing the hours of work.

It was also resolved to request the mills to offer to the Association, for export to other provinces under the all-India scheme, one-third of their production. In case of mills having exports over one-third of their production the mills were requested to maintain at least their present exports, if they cannot increase the percentage of exports.

B. and C. Mills' Dispute

In the matter of the adjudication of the dispute between the workers and the management of the Buckingham and Carnatic Mills, Rao Bahadur M. Venkataramayya, who has been appointed Adjudicator, commenced his inquiry on 16th April at the office of the Commissioner of Labour, Madras.

The first point for adjudication is whether the introduction of the system of one weaver and one assistant weaver for twelve looms has affected the health of the workers and whether the work imposes too great a physical strain on the workers and requires to be relieved against and if so in what manner relief can be given.

The other points are whether the introduction of a basic wage with a percentage increase has affected the earnings of the employees ; whether a large number of workers are kept on a temporary basis for a long period without cause ; whether the dearness allowance now being given to workers is inadequate and should be increased ; whether the rate of bonus is too low ; whether the dismissal of nine workers in December 1944 was illegal ; whether the system of one weaver to look after two looms in the canvas section imposes great strain on the weaver ; and whether leave is not being granted to the workmen for essential customary ceremonies.

Mr. Moore of the Bedaux Efficiency Corporation, Bombay, an expert on schemes of rationalization of industries, met the Adjudicator. He has been asked to make his observations and tender evidence on the first point referred for adjudication.

Cotton Yarn Exports Control Order

The Madras Government have issued the "Madras Cotton Yarn (Export) Control Order, 1945," extending to the whole province. The order provides that no person shall transport yarn from any place in India outside the limits except under a permit from the Provincial Textile Commissioner.

Spun Silk Mills Workers' Day

The Workers' day of the Mysore Spun Silk Mills, Ltd., was celebrated on 13th April at Channapatna in the specially erected pandal in the mill compound. Mr. M. A. Sreenivasan, Minister, presided.

Cocoon Procurement Scheme

An officers' meeting of the Mysore Sericultural Department was held on 26th April at the Secretariat, Bangalore, under the presidency of Mr. M. A. Sreenivasan, Minister for Civil Supplies. The Deputy Commissioners of the silk growing areas, viz., Bangalore, Mysore and Kolar, and also Mr. J. B. Mallaradhya, Additional Secretary, Mr. Noronha, Development Secretary, Mr. S. Narayana Rao, Inspector-General of Police and Mr. K. Shamsuddin Khan and others attended the meeting. The discussions centred, it is learnt, on the cocoon procurement scheme drawn up in connection with silk filature expansion and for procuring cocoons in an organized way. It is stated that the scheme is estimated to cost about Rs. 1.56 lakhs. The question of appointing a D.S.P. under a well-equipped staff for the Sericulture Department has also been, it is learnt, under the consideration of the Government.

Duty On Textile Exports To Ceylon

At a general body meeting of the Handloom Export Market Price Advisory Committee held on the 15th April at Madras, a resolution was passed urging the Central Board of Revenue to withdraw the order imposing a customs (export) duty of 3 per cent. with retrospective effect on handloom goods shipped to Colombo.

New Textile Commissioner for Cochin

To cope with the growing volume of work it has been found expedient to separate the Textiles Department of Cochin State from the Department of Industries and Commerce with a full-time officer at its head, says a press *communique* issued by the Cochin Government. Mr. V. Chandrasekharan, a former supply officer at Karachi, has been appointed as the Assistant Commissioner of Textiles.

Textile Production in Mysore

The production of cotton piecegoods in Mysore State in September 1944 was 4,004,000 yards as against 4,461,000 yards in the previous month. The quantity of yarn spun in mills in the State during the month under review was 2,112,000 lbs., as against 2,239,000 lbs. in the previous month. There was a sudden fall in the prices of all grades of silk owing to the improvement of the war situation. The merchants were anxious to dispose of their stocks at the best possible prices expecting further declines in prices.

Cloth and Yarn Distribution in the Nizam's Dominions

The Cotton Cloth and Yarn Control Order was promulgated in the Nizam's Dominions in July 1943 and a Textile Commissioner appointed to enforce control of prices and ensure equitable distribution of cloth. A quota system, based upon the amount of business transacted by a dealer who, in turn, is to guarantee supply to retailers, has been introduced. With a view to facilitating the regulation of the cloth and yarn trade in the Dominions, a body kown as the Hyderabad State Cloth and Yarn Dealers' Federation has been formed. It is the central organization of all cloth and yarn dealers' associations and helps the authorities in implementing the various control measures introduced by the Government.

OUR PERSONAL COLUMN

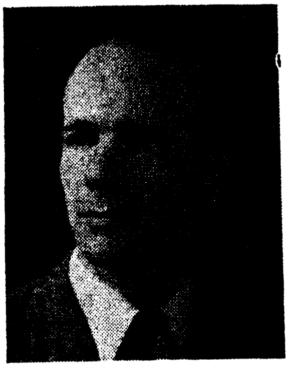
The Hon'ble Sir Archibald Rowlands has assumed charge of his new duties as Finance Member to the Government of India, *vice* the Hon'ble Sir Jeremy Raisman retired.

Sir Raymond Streat, Kt., Chairman of the British Cotton Board, has been elected President of the Association of Technical Institutions in England.

Dr. R. M. Alagappa Chettiar, Bar-at-Law, has been elected President of the Southern India Chamber of Commerce, Madras, for the ensuing year.

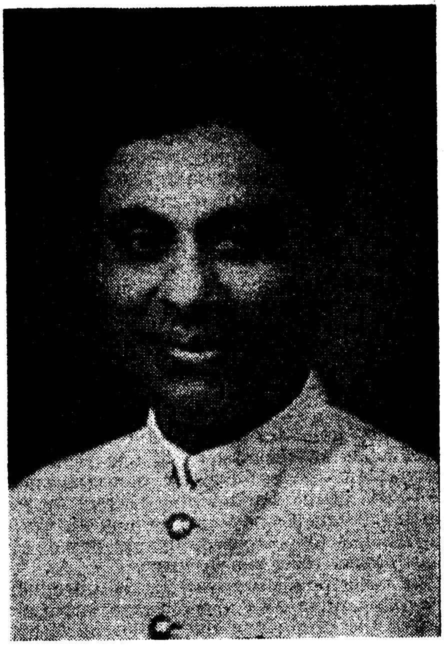
Rao Bahadur K. Sanjiva Rao, L.T.M., A.T.I. (Manc.), has assumed charge of the office of Textile Commissioner, Jaipur State, in addition to his duties as Director of Industries and Commerce.

Mr. P. M. Chinai of Messrs. M. C. Chinai and Sons, was elected President of the Silk Merchants' Association at the general meeting of the Association held in Bombay. Sheth Chellaram was elected Vice-President; Sheth Ramprakash, Honorary Secretary; Sheth Manilal, Honorary Joint Secretary; and Messrs. J. Kimatrai and Co., Treasurers.



Mr. P. Wehli, Factory Representative of Messrs. J. J. Rieter & Co., Ltd., Winterthur, Switzerland, spinning machine manufacturers, has recently arrived in Bombay, and is attached to Messrs. Volkart Brothers' Bombay office.

Mr. Oswald Pomfret, Chairman of the Grove Towel Co., Ltd., Ramsbottom, and **Mr. Adam Glover,** of Courtaulds, Ltd., England, whose liaison work between these rayon yarn producers and the weaving sheds, is well known throughout Lancashire and Yorkshire, have been elected to the Fellowship of the Textile Institute, Manchester.



Sheth Chaturbhujdas Chimanlal, a well-known Baroda millowner and industrialist, left last month by air for America to study the industrial development of that country, especially in textiles, and to purchase plant, machinery, etc., from America and England for the post-war period.

Born in Ahmedabad on 18th March 1904, Sheth Chimanlal was educated at the Gujrat Vidyapith founded by Mahatma Gandhi. His father, the late Rajratna Rajmitra Sheth Chimanlal Girdharlal, was a pioneer of the textile industry in the Baroda State and naturally Sheth Chaturbhuj joined the mill line and gained experience in mill management under his father. He is a partner in the managing agency firms of the Baroda Spinning and Weaving Co., Ltd., Baroda, the Shree Yamuna Mills Ltd., Baroda, the Vasant Engineers Ltd., the Ashok Chemicals Ltd. and Krishna Corporation Ltd. Besides being the proprietor of the Datar Match Factory and the Krishna Pencil Factory, both of Petlad, he is connected with the century old banking firm of Zaverchand Laxmichand. He is also a director of several well-known concerns like the Crystal Industries Ltd. and the National Savings Bank Ltd., Baroda.

Sheth Chaturbhujdas took an important part in the activities of the textile industry of the Baroda State and has been President of the Federation of Baroda State Mills and Industries since the last four years. He is a member of the Textile Control Board, Industry's Committee, Post-war Planning Committee and Post-war Planning Sub-Committee, all of the Government of India. He also takes a leading interest in the civic and public life of the State and is a member of the Baroda State Legislative Council, the Industries Board, the Kalabhavan Advisory Committee, the Pratapsingh Commerce College Advisory Committee, Middle Class Educated Unemployment Committee, etc. He was a president of the Reception Committee of the All-India Manufacturers Conference, and the Hindu Mahasabha as well as of the Gujerati Literary Conference held some time back at Baroda.

Mr. Vilaschandra Govindji Jani, a proprietor of C. J. Textile Accessories Works, Vile Parle, has been elected as member of the Vile Parle Borough Municipality. He is only 23 years old and is its youngest member. He is a member of the P. J. Hindu Gymkhana, Pranjivan Mafatlal Swimming Bath.

Mr. Geo. Arthur Bennett, M.A., M.Sc., F.T.I., Lecturer in the Textile Department of the Manchester College of Technology, has been appointed head of the Textile Department of Blackburn Technical College, Blackburn, England. Mr. Bennett who holds the final certificates of the City and Guilds in cotton spinning and weaving was manager's assistant with Messrs. S. and J. Prestwich, Ltd., cotton spinners, Farnworth, before he joined the Manchester College in 1926.

It is reported that **Sir Percy Ashley,** Chairman of the British Rayon Federation, is going to New Zealand to advise the Government and explain what part Great Britain could play in helping a rayon industry there. This was revealed by the Minister of Finance, Mr. Nash, speaking at Wellington, N.Z., when he referred to the possible establishment of such an industry in New Zealand.

Mr. Ernest Stroud who has been elected President of the Illuminating Engineering Society, London, England, for 1944-45, has for many years been Chief Engineer of Holophane, Ltd., and for the last five years General Sales Manager. He has served on various committees of the British Standards Institution, including street lighting, portable photometers, light distribution, lighting fittings, and A.R.P. street and factory lighting. He is an associate member of the Association of Public Lighting Engineers, and Chairman of the Street Lighting Section of the Electric Light Fittings Association. He acted as Treasurer of the I.E.S. from 1936 to 1938.

Mill Staff News

Mr. Shiv Dutt Rai, student of the final third year senior diploma class of the Government Central Weaving Institute, Benares, has been awarded the Tata and Sons Ltd., first prize of Rs. 100 in the Textile Woven and Printed Designs Competition organized by the Textile Association (India), Bombay. This prize was announced during the second All-India Textile Conference held early this year.

Mr. A. N. Ghose, L.T.M. (Hons.), Weaving Master, Azamjahi Mills, Ltd., Warangal, has been transferred as the Weaving Master of Osmanshahi Mills, Ltd., Nanded. He took charge at the Osmanshahi Mills on 1st February 1945.

Mr. Janardhan G. Anja, L.T.M., who has over five years' experience as an Assistant Weaving Master, is now open for engagement.

After passing his matriculation he joined the V.J.T. Institute, Matunga, in the year

1933. Being interested in his line, he worked during the long vacations in cotton mills and gained practical knowledge. The Institute had sent him to the Standard Mills, Bombay, for six months' practical training during the last session, where he worked under Mr. F. H. Marshall, Spinning Master, and Mr. V. A. Ajgaonker, Weaving Master. His practical performances soon secured him a job as Assistant Weaving Master in the Mafatlal Mills, Navsari, after his passing out in the year 1937.

Mr. Janardhan Anja.

He served in this mill for 1½ years, and was in-charge of night shift. While working here he obtained considerable experience of winding, warping and sizing departments. Later he joined the Digvijay Mills as Assistant Weaving Master in-charge of the night shift, and served for about 2½ years. Then he served under the Controller of Inspection as Examiner of Stores (Tex.) up to November 1944.

Mr. Anja was awarded "Full Technological Certificates" by the City and Guilds of London Institute in the year 1940, having passed the examinations in cotton spinning, cotton manufacture (weaving) with applied engineering and cotton economics.

He is now open for engagement, and is prepared to take any responsible job in cotton manufacture (weaving).

Obituary

Mr. Thomas Ashurst, Director of the Cotton Spinners' and Manufacturers' Association, Manchester, passed away recently at his home in Kersal. He entered the employment of the Cotton Spinners' and Manufacturers' Association as Assistant Secretary about 25 years ago and some years later was appointed Secretary and was made a Director shortly before the war. He served on various committees of the British Employers' Federation, and had attended several conferences of the International Labour Organization at Geneva and in the United States. He was actively associated with the Shirley Institute, and was on its executive committee for many years.

Mr. Kantiyalal Gurg, the Secretary of the Cloth Merchants' Association, Ajmer, died of heart failure on 24th March 1945. He had rendered valuable services to the Association and his zeal in looking after the interests of the trade in Ajmer and his ability in organizing the activities of the Association had earned for him the admiration of his friends.

Mr. T. S. Balarama Iyer

We regret to record the death of Mr. T. S. Balarama Iyer, B.A., Managing Director, the Sitaram Spinning and Weaving Mills, Ltd., Trichur, on 1st May 1945 at his residence in Pushpagiri, Trichur, at the age of 63.

Only a short time back was the Shasthyabda Poorthi of Mr. Balarama Iyer celebrated with great *eclat* by the Directors, technical staff and the workers of the mill and at that time addresses were presented to him recalling the great services rendered by him to the country and to his mill.

Under the inspiring guidance of his uncle, the late Dewan Bahadur T. R. Ramachandra Iyer, Mr. Balarama Iyer started the mill with only five handlooms in a cadjan shed 35 years ago and gradually by careful and economic management it was developed to the present Sitaram Spinning and Weaving Mills Ltd. It now consists of 416 looms and 15,572 spindles and is fully equipped with a workshop and foundry and dyeing, bleaching and finishing plants.

Mr. Balarama was very popular with the mill staff and workers and was always keen in promoting their welfare. His chief lieutenant Mr. T. K. Kodandarama Iyer, who has got over twenty years experience in the line succeeds him as Managing Director of the mill.

Seth Motilal Kashandas Parikh

We regret to record the death of Seth Motilal Kashandas Parikh, Managing Agent of the Petlad Bulakhidas Mills Co., Ltd. and Proprietor of Shree Laxmi Silk Mills, Bombay, at Muttra on 5th April 1945 at the age of 65. Born in 1879 in Petlad, Seth Motilal had his education in Gujrati and English and joined his father's firm of shroffs and bankers and gained valuable business experience. At the age of 27, he started a yarn dyeing works in partnership with three members of his family under the name of "Sayaji Dye Works." Out of the profits of this concern, Seth Motilal donated a handsome amount of Rs. 50,000 in 1917 to the Motilal Jamnadas Maternity Hospital which is a great boon to the inhabitants of Petlad and surrounding districts.

Encouraged by the success of the Sayaji Dye Works, he promoted and started a spinning mill, named the Petlad Bulakhidas Mills Co., Ltd., in 1919 in partnership with the same members, and worked hard to put it on a profitable and progressive basis. He expanded his business activities still further and started a silk weaving factory in Bombay in partnership with the sons of Seth Bhagubhai Chunilal of Ahmedabad under the name of Shree Laxmi Silk Mills. This concern has also earned a good reputation.

Seth Motilal had for a time officiated as President of the Federation of Baroda State Mills and Industries. He was unassuming and sociable and was very popular with the workers. He had spent and donated liberally for a number of religious, public and charitable institutions.

He was taking a prominent part in the public activities of Petlad. As he was keeping indifferent health since the last five years, he had retired from business which was entrusted to his sons. He had gone on a pilgrimage to Muttra and died there from heart failure.

Charting the Future

THE number of spindles or looms in any one country can measure nothing more than the potential productive capacity and even this is very approximate. The hours of work, shifts and modernization or obsolescence are ignored and it is a difficult task to convert "potential" into "actual" commercial capacity. Comparative wage levels, fibre and yarn costs, freights, etc., must also be taken into consideration. Disraeli's dictum that there are three kinds of lies—lies, damned lies and statistics—was only a partial truth.

Dr. T. H. C. Stevenson, of the General Register Office, has wisely said: "One thing which I am certain cannot be proved by statistics is what the future is going to bring forth." But statistics *are* very important in forecasting future trends and conditions since To-day is the Father of To-morrow.

Recently an American business expert asked the following pertinent questions: (1) Are you taking steps to determine as accurately as possible just what your post-war market will be ? (2) How much of your original pre-war market will still be available ? (3) What are the possibilities of cultivating entirely new markets ? (4) To what extent will your customers' buying habits have changed ? (5) Are you prepared to face drastic changes in consumer buying habits, caused by war-time upheavals and regimentations ?—*Fibres, Fabrics and Cordage.*

Labour Welfare Activities in South India

Buckingham and Carnatic Mills, Madras

THE Buckingham and Carnatic Mills employ over 9,000 workers. The Royal Commission on Labour remarked that the mills' welfare work has given a lead to the rest of industrial India. There is a school for boys engaged on half-time work at the mills and the sons of the mill workers. Education imparted there includes technical classes. The health and cleanliness of the boys is also looked after. Medical inspections, instruction in hygiene and physical culture are given proper attention. Special meals are provided for sick boys. There is a large dispensary attached to the school, quite apart from the dispensaries in the mills themselves. At the dispensaries workers and their families receive free treatment. A midday meal is provided for those who live too far away to go home. There is also a night school. A welfare committee was instituted in 1922. The members are chosen partly from the management and partly by the workpeople from among themselves by departmental elections. The committee meets at regular intervals to settle matters of labour welfare. The company has built four model villages for workers on land belonging to the mills. A nominal rent is charged for every house. A committee elected by the residents is responsible for conducting the affairs of the village. Schools for girls and kindergarten children exist in the mill villages. There are large recreation grounds. Football, cricket, badminton and volley-ball are played keenly. There are workmen's stores to provide the necessaries of life. Workers have their own club which has a library and reading room.

22nd Annual Report of the Welfare Committee

For the first time the welfare committee was elected by and formed the departmental committees. Eleven ordinary meetings and two special meetings were held during 1943. The main subjects discussed were giving relief to tide over the serious floods of October 1943, distribution of wages, system of warning, contract labour, shortage of coal, etc. The unprecedent flood of 10th October washed away many of the houses of the workers. The company itself sustained incalculable losses and work had to be suspended. The company paid to the workers a generous allowance during the period of stoppage. Ever since the introduction of night-shift in mills it was customary to distribute wages to the night-shift workers at 7-30 a.m. on the day following the pay day. This was found inconvenient and the committee made representations to the management. As a result arrangements were made for paying the night-shift workers at about 5-15 p.m. and the day-shift workers at 5-30 p.m. In 1942 the Managing Agents had decided that it was not necessary for the welfare committee member to be present at the time warning was given to any offending worker. This arrangement continued though the committee was against it.

The committee passed a resolution for giving preference to contract labour for employment as temporary workers. Subsequently the contract labour system was abolished and all workers who were competent to be taken on as temporary workers were drafted into the mills. In December the mills had to be closed for two days due to coal shortage. During the period of closure the permanent worker was paid two-thirds of his average wages and the temporary worker half his average wage as allowance besides their dearness allowance.

Games

Facilities were provided to a very large number of workers to play various kinds of games. Unlike the previous years, no annual sports were held. Football, cricket, hockey, volley-ball, basket-ball, baseball and badminton are the chief games played. Playgrounds have been laid out in the mills' villages and various games were conducted. Full-time staffs were appointed for the efficient working of the mill's A.R.P. subsidiary scheme. Training classes in A.R.P. for the workers were held. A.R.P. posts and bricklined trenches were built by the company in the mill's premises. To facilitate evacuation of workers from the mills to slit trenches in the minimum time, shelter marshalls were appointed in every department. During the October floods, A.R.P. personnel rendered invaluable assistance in protecting the company's property. No excursion for the workers could be arranged during the year. The company's share of the excursion expenses was contributed to the flood relief fund. When rationing was introduced in the city the workmen's stores was registered as a grain shop. In June the stores began to supply rice to all workers—both permanent and temporary. The proposal for a change-over from the credit system was given up by the management on the committee's disagreement with it. In September the rationing of rice was introduced in the city. Certain irregularities in the enumerations made regarding workers were brought to the notice of the rationing authorities and rectified. As a result of correspondence between the committee and Managing Agents, the latter let out a portion of the company's land to the workers for vegetable cultivation. The Agriculture Department promised to supply seeds and manure. The difficulties experienced by the workers in getting cloth were brought to the notice of the management. *Dhotis* and *saris* could not be made as all the wide looms were weaving hospital sheets, but a standard cloth suitable for making garments was devised and sold.

When the dramatic society stressed the need for a suitable place for holding rehearsals and dance practices the Managing Agents built a suitable place on the top of the Welfare Institute. Six performances were given during the year. Three public-meetings under the auspices of the debating society were held and discussions were held by the study club. The mill's radio conducted a daily programme of news, talks and music with the co-operation of the local Station Director of the All-India Radio. There is a night school but the night shifts have made attendance irregular.

An up-to-date dispensary for the mill workers was opened in 1942. There have been increasing

(*Continued on page 566*)

Cloth Rationing in Bombay

Other Control Notes and News

337 Approved Shops

THE Government of Bombay have decided to ration mill-made cotton cloth of varieties commonly in use for wearing apparel, rationing to start in Bombay City and the Bombay Suburban District in the first week in June.

Only a few important varieties of cloth, which have been difficult to obtain at controlled rates, are to be rationed. These cover *dhotis*, *saris*, mulls, voiles, dorias, coating and shirting, including bleached longcloth. Silks, woollens, mixtures of the two, hand-made cloth, hand-made *saris*, and general household wear, though manufactured from cotton, are excluded from the ration range.

The quantum will be fixed for each individual on the basis of foodgrains units, half the adult's quantum being allotted for children below six years. Under the scheme each adult—and an adult for purposes of cloth rationing is a person above the age of six—will be allowed 30 yards of rationed cotton cloth a year. Children below six will be given 15 yards for the year.

The half-year's quota can be bought at a time in the second quarter, but the purchases in the first quarter will be limited to only two-thirds of the yardage to which the card holder is entitled.

Government have imposed no restrictions on the purchase of shirting subject to the quantum allowed by the card, but an adult can buy coating upto eight yards only. Similarly, *dhotis*, *saris*, mulls, voiles and dorias can be purchased up to 12 yards only out of the individual's total quota of 15 yards for every six months.

Individuals will be, however, free to meet their additional requirements from cotton goods manufactured by handlooms and power-looms and silk and woollen fabrics. There will be no restrictions on the sale of ready-made garments until the present stocks are exhausted.

The Government of Bombay have approved 337 shops for selling rationed cloth. The remaining cloth shops will be free to sell non-rationed cloth of mills and other manufacturing agencies. It is learned that the rationed cloth shops will not compete with these shops in accordance with the mutual understanding.

Applications for the purchase of rationed cloth must be made on prescribed application forms which are available at all ward rationing offices and Government grain shops.

Procedure Explained

For private households, form C-1 is to be used. A separate application must be made for each head of the household as shown on the foodgrains ration cards. The form, duly filled in by the head of the household, should be presented along with the foodgrains ration cards of the members to the ration shop where the ration cards are registered for foodgrains. The ration shopkeeper will certify on the application form that the cards are validly registered with him and return the application to the applicant. In the case of persons who have left Bombay temporarily and whose ration cards have been deposited at the rationing kiosks or the Ward Office the deposit receipt should be attached to the application form.

Form C-2 is to be used by permanent residents of establishments who do not hold individual foodgrains ration cards. The applications should be handed over to the proprietor-manager of the establishment who will present them with a covering application in form 'E' to the rationing office of the ward in which his establishment is situated along with his foodgrains ration permit and authorization. After verification the ward rationing office may endorse certificates of eligibility in respect of each application and hand over the applications to the proprietor-manager for being returned to the applicants.

The application forms duly attested by the ration shopkeeper together with the foodgrains ration cards or the certificates of eligibility, as the case may be, will have to be produced at any rationed cloth shop between 9 a.m. and 1 p.m. or 3 p.m. and 7 p.m.

E

The registration of applications for the purchase of rationed cloth in Bombay City and the Bombay Suburban District began on Monday (May 7).

Government approved cloth shops and a few more which have been added to the list will be the rationed cloth shops. Applications should be presented at any rationed cloth shop along with all the foodgrains ration cards and deposit receipts in the case of deposited cards. Rationing inspectors posted at the shops will verify the details, and stamp the foodgrains cards and applications.

Only those applications which have been duly certified by the foodgrains ration shops in the case of householders and by the ward rationing offices in the case of residents of establishments will be accepted for registration.

After verification and stamping of the cards by rationing inspectors posted at the shops and the necessary endorsement by the cloth shopkeeper, the counterfoil and the ration cards or the certificate of eligibility will be returned to the applicant. This counterfoil must be preserved carefully as it will have to be produced at the time of the first purchase of cloth in the month and week mentioned on it.

It is believed that the cloth ration may be drawn in two half-yearly periods, except in the initial stage after the introduction of rationing. Only eight to ten yards will be allowed to be drawn in the first three months, the balance for the half-year will then be allowed to be purchased. This is being done to conserve stocks at the start.

As in the case of foodgrains a maximum may be fixed within the cloth ration schedule for certain basic varieties. By that, it is understood, an adult may draw only up to 20 yards in *dhotis* or *saris*, equal to two pairs of *dhotis* or four *saris*, out of his or her annual allotment. The balance of the ration must necessarily be taken in other cloth types.

Cloth rationing, it is expected, will subsequently be extended to other parts of the province.

Special arrangements are proposed to be made regarding the supply of cloth for funeral purposes in Bombay City and the Bombay Suburban District, through recognized communal and charitable institutions and special shops dealing in cloth for such purposes. Such institutions and shops should apply to the Provincial Textile Controller, opposite Kalachowki, Parel Road, Bombay, giving the full name and address, the community served, requirements of cloth and other relevant details.

DECLARATION OF CLOTH STOCKS

New Government Order

The Government have issued an order requiring persons who hold stocks of mill-made cotton cloth for purposes of business, to submit declarations in the prescribed form of the stocks held by them in Bombay City and the Bombay Suburban District.

The varieties of mill-made cloth of which stock declaration is required to be made are: *dhotis*, *saris*, mulls, dorias, voiles (whether plain, printed or processed), coatings and shirtings, including longcloth but other than grey shirtings.

Stocks of imported cloth and stocks held in partnership or on account of any other person should be shown separately.

Neither the manufacturers nor the quota holders who purchase direct from a manufacturer and whose stocks are frozen need make the declarations. All other dealers in cloth, including the hawkers, are, however, required to make the declarations.

Printers or processors of cloth, tailors, dealers in ready-made clothes and persons dealing in articles made of cloth such as caps and mattresses should make the declarations of the stocks other than those held on behalf of customers.

Excepting dealers and printers and processors who have to declare the entire stock, all other persons are required to make the declarations only if the total stock held by them on their own account exceeds 50 yards.

The Textile Industry (Rationalization of Production) Order, 1945

The Textile Industry (Rationalization of Production) Order, 1945, has been promulgated by the Central Government and published in the *Gazette of India Extraordinary* dated 18th May 1945. The Order requires all manufacturers to take certain measures from the 1st of June 1945 calculated to increase the output of utility cloth, consisting mostly of *dhotis*, *saris*, longcloth, shirtings, drills, twills, etc. The Order lays down that manufacturers shall utilize not less than 90 per cent. of their civilian production capacity on the manufacture of utility cloth. The Order also limits the number of varieties to be produced by the manufacturers.

Four hundred million more yards of mill-made cotton cloth—almost a yard more for every man, woman and child in the country—it is confidently hoped will be realized annually by the Textile Directorate of the Government of India and the textile industry, as a result of the new textile Rationalization of Production Order which comes into effect from 1st June.

The textile industry is to-day at liberty to manufacture what it likes after fulfilling the requirements of the defence services. A large measure of that industrial independence will be restricted from 1st June by the new order, under which textile mills will be required to devote 90 per cent. of the weaving energy normally given to civilian needs to the production of standardized utility varieties most commonly in use in the country.

The textile industry is left free to manufacture fine and fancy varieties for domestic sale or export if it chooses to do so from the remaining 10 per cent. quota left to it.

The following is the range of utility varieties to which 90 per cent. of civilian mill production will be applied from 1st June:—*Dhotis*, *saris*, longcloth, sheetings, chaddars, shirtings, voiles and mulls, drills and twills, tussores, shirting and coatings. Approximately 50 per cent. of the 90 per cent. of utility production will be *dhotis* and *saris*.

New Term for Quality

Utility cloth is a newly coined war-time term for quality. In this type of product the average count cannot under the new regulation exceed 75. In ordinary similar varieties the count may go as high as 125.

The general effect of the new rationalization order will be to standardize both production and quality throughout the industry, and the cumulative effect will be to increase production by hundreds of millions of yards, materially reducing the cloth scarcity in India.

Cloth and Yarn (Export Control) Order Amended

The Cloth and Yarn (Export Control) Order, 1944, has been amended by a notification published in the *Gazette of India* dated 19th May, providing that the standard price of cloth or yarn shall be the ex-factory domestic price fixed by the Textile Commissioner and ruling on the date of the contract entered into by the exporter with either the manufacturer or the export wholesale dealer. If, however, the manufacturer himself is an exporter, the standard price shall be determined with reference to the date of contract between the manufacturer and the overseas importer. The amendment further provides that the seller or exporter may add to the sale price or the export price the amount of the actual freight incurred in transporting such cloth or yarn to the place at which it is delivered or shipped for export if the latter is more than 100 miles from the place of manufacture.

Foreign Cotton Control Order

By a notification in the *Gazette of India* dated 19th May 1945, the Government of India have included in the Schedule to the Foreign Cotton Control Order, 1944, Peruvian Pima cotton and all other American cottons. This schedule already includes cotton from Egypt, Sudan, Kenya, Uganda and Tanganyika and the addition, in effect, means that all foreign cotton, except Afghanistan, in which business is or might be practicable in this country is brought within the scope of the Foreign Cotton Control Order, the provisions of which are already well known to the cotton trade.

Ban on Cloth Sale by Manufacturers

With effect from the 15th May 1945, the Textile Commissioner to the Government of India has prohibited manufacturers from selling cloth in retail to consumers either from the manufacturing premises or from mill retail shops. A circular to this effect has been addressed to all the mills. Sales, however, to mill employees only have been permitted under certain conditions. Manufacturers who had retail sales organizations prior to the introduction of textile control, may apply to the Textile Commissioner for a special permission authorizing sales from such shops. Each such application will be considered on its merits.

Mr. S. C. Roy on Equitable Distribution

In the course of his speech before a recent meeting of the Provincial Textile Control Advisory Committee, Calcutta, Mr. S. C. Roy, Chairman, observed as follows:

"The time has come now to consider whether some arrangements should be made for distribution of cloth on an equitable basis among the entire population of the province; to consider, that is to say, the question of rationing of cloth. Two important questions are to be considered in this connection. Firstly, if rationing is introduced each adult will be entitled to receive in a year only one pair of *dhotis* or one pair of *saris* or 7 yards of cloth which is sold by yardage. After one supply has been given to a particular person he or she will not receive another for the next 12 months. Cloth coupon may be issued on the basis of ration cards and people may receive their quota of cloth from nominated retail shops in exchange of these coupons. The second problem to consider is that against an allocation of roughly 25,000 bales of mill-made cloth or 34,000 bales of cloth including handloom products, there are about 80,000 dealers throughout Bengal. In any scheme of rationing it is impossible to maintain so many dealers, many of whom will have to be eliminated. I believe that formerly so many dealers were not in the field and that, attracted by the large profits in cloth trade, they have sprung up all over the province like mushrooms. While it is necessary to protect legitimate trade interests, it is essential that undesirable and unnecessary links should go. In the matter of distribution, the Government of India have not given any definite lead at all. They started with the introduction of the quota scheme between the millowners and the quota-holders but did nothing to regulate the subsequent links in the chain leading the goods to the ultimate consumers. It was understood previously that the Government of India would prepare a comprehensive scheme of distribution for all provinces but this hope has been belied. We have come to learn that the Government of Bombay, evidently under the authority of the Textile Commissioner, have taken some steps regarding rationing in Bombay."

SUPPLY OF CLOTH TO POONA

Monthly Quota Fixed

The acute shortage of cloth in the Poona District was expected to be relieved to some extent this month with the arrival of 1,500 bales of cloth from Ahmedabad for distribution in the district.

During the last six months, it is estimated that, on an average, not more than 300 bales per month were coming into the district, a supply which was absolutely insufficient to meet the public requirements. The Textile Commissioner, Bombay, has now fixed a permanent monthly quota of 1,661 bales for the Poona District under the new cloth trade regulation scheme. The quota, though not sufficient to meet fully the requirements of the public, will, it is hoped, ease the cloth situation to a good degree.

Standardization of Cloth

The Industries Committee met in Bombay on Saturday the 28th April and considered the question of standardization of cloth. Mr. Krishnaraj M. D. Thackersey, Chairman of the Textile Control Board, presided. Mr. H. M. Patel, Joint Secretary, Department of Industries and Civil Supplies, Government of India, Mr. M. K. Vellodi, Textile Commissioner, and Mr. D. M. Passmore, Additional Textile Commissioner, also attended the meeting.

The Committee is understood to have considered standardization of the varieties of cloth to be made available to the public.

Yarn Dealers' Licences

The validity of existing yarn dealers' licences in Bombay Province has been extended from 30th April until 31st October next.

These licences are issued under an order made by the Government of Bombay in 1942. It provides that no person, except the owner of a textile mill or any person selling, storing for sale or carrying on business in cotton yarn spun by himself or members of his family, shall sell, store for sale or carry on business in, cotton yarn unless he holds a licence issued by the Director of Industries and Yarn Commissioner for the Province.

* * *

The Government of Bombay has applied the Bombay Cotton Cloth Trade Regulation Order to Sholapur City and certain adjoining areas with effect from 30th April.

Why Not Relax Control?

A CORRESPONDENT from Rajkot, who signs himself "Clean-cut," emphasizes the man-made character of the present cloth famine and shows statistically how relative shortage is present, but no famine as such. This point was brought out clearly by Sir Vithal Chandavarkar in his address to the latest annual meeting of the Millowners' Association, Bombay. They agree also on the inadequacy of transport arrangements in the country. Proceeding in the same vein, the correspondent observes:

"The Textile Control Order came into force in 1943; with numerous additions and amendments since then, its effects began to be seriously felt from the beginning of 1944. With stricter control, scarcity began gradually to emerge, and when to-day Government have almost full control over distribution all over India a state of famine exists. Moving the wheels of the control ever more tightly has deprived honest and God-fearing dealers of their legitimate trade, while several black sheep have exploited the control orders for their own benefit.

Since the planning of distribution of cloth on provincial basis and fixing quotas for each province, the authorities have been repeatedly proclaiming from the house-tops that the cloth available *per capita* is only 10 or 12 yards per annum. Putting the cloth situation in an alarming light by the authorities was bound to have undesirable effects on the masses, as they thought that an individual was entitled to 10 or 12 yards of cloth per annum, patently insufficient to clothe anybody, and panicky buying by all followed. Actually, India was consuming only about 15 yards per head on the computation of 6,000 million yards for 400 millions, and this quantity could clothe India without the masses knowing anything about it, and all could get as much cloth as wanted. Thus the masses were rather unnecessarily scared and the recent rush is the sequel. Instead the authorities should have wisely announced the figures of pre-war consumption and the quotas now fixed for each province in total number of yards or bales and this would have served the purpose sufficiently, without causing any popular alarm.

The war in the West has after all come to a close. By slackening control or reducing it to a very mild form now, the cloth at this moment would immediately come out from underground and would be available at increasingly reduced rates.

Commercial and Technical Organizations

Indian Merchants' Chamber, Bombay

Visit of Chief Controller of Imports

THE following points were discussed by the Import-Export Sub-Committee of the Indian Merchants' Chamber, Bombay, at an interview with the Chief Controller of Imports, Government of India, early last month

Import of Cornelwood Blocks for the Manufacture of Shuttles.—Since the year 1943 the Committee of the Chamber have been carrying on correspondence with Government, emphasizing the necessity for giving facilities for the import of cornelwood blocks used in the manufacture of shuttles. Shuttles form an important item of millstores and the shuttle manufacturing industry in this country was well established since the beginning of the war, which enabled the mills to secure shuttles when foreign imports of the same were difficult to obtain. The difficulty with this industry is that the indigenous wood is not suitable for the wood blocks from which shuttles are manufactured. It was, therefore, necessary to import this raw material, i.e., cornelwood blocks from U.S.A. which is the chief source of import. Owing to absence of facilities for the import of this raw material, many shuttle manufacturing mills have since had to close down. Such an important industry deserves every encouragement by Government and it will die if they would not give preference to increased import of the raw materials, viz., cornelwood blocks. Raw materials in the shape of cornelwood blocks will occupy less shipping space than the manufactured articles.

Licensing of Imports of Dyestuffs and Chemicals.—The percentage of the share of registered Indian importers in the total import of dyestuffs into India is steadily declining while there is a gradual increase in the share of some of the concerns which have recently entered this trade. The Chamber emphasizes that long established importers should receive first consideration and the balance of the quota then remaining may be distributed amongst those coming next in preference.

In regard to the issue of import licences, the present practice of making them available to importers very late in the season does not help them to get their goods in time. Government is requested to issue the licences for a particular shipping period before the commencement of that shipping period.

The Committee had taken up with Government the question of their (Government's) import policy with regard to chemicals. It was emphasized that when considering the question of allotment of quotas and the issue of licences for imports, Government should examine the possibility of Indian production meeting the internal requirements and licences issued should be strictly limited to the extent of the deficiency in the internal production and supply.

One fails to understand why import control on bichromates should have been lifted under notification No. I-ITC/45 of 2nd March 1945 wherein general permission is given to import bichromates from the U.K. It is hoped that at least the chemicals which are manufactured in this country on a scale which would meet the requirements in the country will be excluded from the notification referred to above.

The Chamber had also taken up the question of the Government policy of canalization of import licences for hydrosulphite of soda and zinc chloride when an assurance was given that licences would be issued to accredited representatives of manfacturers, only for the second shipping period for 1944. It is regretted that this assurance has not been followed by giving licences to the trade concerned, subsequently. Such canalization of trade in the hands of a few persons is bound to react as a hardship on the general trade concerned.

Import Licences for Millstores.—The Committee of the Chamber had pointed out to Government last year the injustice caused to the millstores trade, by issuing licences for the import of stores from the U.K., only to such parties as had previous quota of imports from the U.K. While issuing such licences, no account was taken of imports in the basic period from countries other than the U.K. It was suggested in equity that the existing quotas for imports should be distributed among all established importers without any distinction in regard to countries from which they were importing in pre-war period. It is not understood why this limitation should have been placed on imports of millstores when in the case of dyestuffs such a restriction has been relaxed. It is also suggested that instead of the basic period for the calculation of quotas being one year in the case of millstores, the same should be extended to a longer period taking into consideration previous imports from about the year 1937, for the purpose of determining quotas.

Increase in Depreciation Allowance for Plant and Machinery and Buildings.—The Finance Member announced recently the grant of depreciation for plant and machinery and buildings at the rate of 20 per cent. and 10 per cent. respectively, and the Chamber submitted that such allowances should be granted as from 31st March 1941. The Chamber held the view in this connection that all new installations during the period of the war naturally had been made at costs considerably higher than those prevailing during normal times, and with a view to assist the process of re-equipment, they felt that the expenditure on new buildings and installations incurred after 31st March 1945 would not give the desired relief.

In this connection the Chamber referred to the likely practical administrative difficulties which Government might experience, and suggested that instead of allowing extra relief as demanded in the year of erection and installations, the same might be available for the first assessment year after the coming into force of new basis of allowance in respect of all additions and new installations after 31st March 1941.

Industrial Statistics Act, 1942.—At the instance of a member firm, the Chamber addressed the Government of India on the 27th March, referring therein to the question of information to be supplied under the Act. It was understood that very detailed information was sought to be obtained under the above Act, involving great labour and inconvenience to industrialists and manufacturers. The Chamber, therefore, suggested that information should be obtained only on the following, as recommended by the XIth Industrial Conference : (1) Number of factories; (2) gross output—(*a*) quantity, (b) value ; (3) total cost of materials—(*a*) Indian, (*b*) imported; (4) total wage bill ; (5) number of persons employed ; (6) total cost of power.

The Millowners' Association, Bombay

Representative on the Technological Research Sub-Committee of the Indian Central Cotton Committee.—The Association has appointed Mr. J. C. Lancashire as its representative on the subcommittee.

Representative on Indian Central Cotton Committee.—The Association has re-appointed Sir Sorab Saklatvala to represent it on the Committee for another year from 1st April 1945.

Association's representative on the Post-war Planning Committee for the Cotton Textile Industry.—The Committee nominated Mr. Dharamsey Mulraj Khatau and Mr. Neville N. Wadia to represent the Association on the proposed Post-war Planning Committee for the Cotton Textile Industry, which the Government of India proposed to set up, in accordance with the decision of the Industry's Committee.

The All-India Board of Textile Studies.—With a view to co-ordinating technical education throughout India including Indian States, an Association of Principals of technical institutions was formed in July, 1941. This body was expected not only to indicate the lines on which development in technical education should follow but also to frame courses and syllabuses which might generally be adopted throughout the country. In furtherance of this aim, this body had worked out schemes for All-India Diploma and Certificate courses in various technical subjects and had already set up a Joint Examination Board in Commerce, an All-India Board of Engineering Studies, an All-India Board of Architectural Studies and a Joint Examination Board in Chemical Engineering and Technology. The Association was represented in the last mentioned organization, namely, Joint Examination Board in Chemical Engineering and Technology, by Sir Shri Ram. Towards the middle of January, it was proposed to set up an All-India Board of Textile Studies with Sir Vithal Chandavarkar as Chairman. The Association was requested to nominate a representative to serve on the Board and the Committee nominated Mr. Dharamsey Mulraj Khatau as the representative of the Association on the Board of Textile Studies.

Karachi Chamber of Commerce, Karachi

Wagon Supply for Cotton.—The Chamber drew the attention of the Regional Controller of Railway Priorities and the General Manager of the North Western Railway to the unsatisfactory position of wagon supply for cotton on the North Western Railway in the Karachi Division, and requested that maximum facilities be granted for moving cotton generally. The Chamber also urged that priority permits for cotton, which expired before the cotton could be moved, be automatically extended in order to save time and trouble in obtaining fresh permits. The Chamber also addressed the Jodhpur Railway urging that the maximum quantity of cotton be moved within the quota of available railway wagons and suggesting that if necessary the Railway Board be approached with a view to obtaining additional metre-gauge stock to meet the peak season demands for the transit of pressed bales to Hyderabad.

Cotton Shipments to Bombay and West Coast Ports—Through Booking.—The Chamber addressed the coastal shipping companies pointing out that the system of through booking of cotton from up-country for transport by sea to Bombay and the ports on the West Coast of India acted detrimentally to the interests of the Karachi cotton trade, and requested that the system of through booking be suspended for the duration of the war.

A reply was received from a coastal shipping company to the effect that they had no objection to the suspension of through bookings of cotton from up-country for the duration of the war or until the tonnage position returned to normal, but that they had not been successful in obtaining the agreement of other shipping companies to adopt a similar attitude. It was observed that for up-country merchants the through booking arrangements were of great assistance and some inconvenience would be caused to them through the entire suspension of through bookings, although such an action would sometimes be in the interests of the majority. The Chamber was, however, assured that a fair proportion of available space would be allocated to local shippers.

New Chairman and Vice-Chairman.—Mr. W. B. Hossock, M.L.A., has been returned unopposed as Chairman and Mr. B. R. Graham, Vice-Chairman of the Chamber for the year 1945-46.

Supply of Cotton Seed for Sowing in Sind.—The Chamber represented to the Director of Agriculture, Sind, urging that his department should approach the Regional Controller of Railway Priorities, Lahore, without delay, to grant priority not lower than Class IV for immediate imports of cotton seed from the Punjab and Bahawalpur, in view of the insufficiency of pure seed in Sind to meet the demands of cotton growers in Sind.

The Director of Agriculture replied that the Government of Sind had decided that the import of 289F types of cotton only be permitted from the Punjab and that these should include K-25, K-23, 289F, 199F and 124F. The import of Deshi, 4F, L. SS. and Mollisoni was not permitted.

Advice was received to the effect that cotton seed intended for sowing purposes certified by the Government of Sind would be given priority assistance and the Chamber was informed that the Regional Controller of Priorities, Lahore, had been approached through the Sind Transport Board and that the permits were awaited.

Marwari Chamber of Commerce, Calcutta

Protest Against Appointment of Cloth Handling Agents.—The Chamber has addressed the Director General of Consumer Goods, Calcutta, protesting against the appointment of four handling agents for cloth, and against the profit margins fixed by the Government of Bengal for the various classes of goods. They fear that the prices and margins have been fixed on the advice of the handling agents themselves and that they are designed to discourage imports from other centres as much as possible and to reduce or eliminate the distributing trade.

The Marwari Chamber's memorandum further give certain figures to support their contention that the grant of a commission of 2½ per cent. to the handling agents is excessive. It also gives certain figures, with respect to the goods of both Bengal mills and outside mills, the procurement value over ex-mill prices, realizable value over ex-mill prices, and the margin of profit, and urges Government to explain who are going to share in this margin and how.

It is alleged that, before the appointment of the handling agents was made no tenders were invited and that the persons selected have no experience of the trade. Their operations, it is complained, have caused no end of trouble and annoyance to the regular dealers, and their terms of appointment and the prices fixed have been characterized as being irrational, the dealers having to sell to the handling agents at rates lower than those at which they were purchased.

The Chamber urges, therefore, that early steps should be taken to see that the normal course of trade and business is allowed to function as far as possible. The dealers, they say, may be brought under the complete control of Government and be allowed to perform the duties and functions now allotted to the handling agents as in the case of Bombay, Ahmedabad and other provinces where the Governments have been successful to a great extent. It is quite possible for the Government to initiate a scheme of cloth control and *rationing* by absorbing the long-established and *bona fide* dealers as integral parts of the scheme and using them, subject to the full control of the Government, to carry out whatever may be the policy of the Government.

Bengal Chamber of Commerce, Calcutta

Foreign Publicity in the Interests of India's Post-war Trade.—It was the desire of Government that commerce should give careful thought to publicity arrangements in countries outside India in order to establish the markets which India's expanded production would need in the post-war period and to secure greater attention to Indian attainment in the realm of art and industry; and it was proposed that, in consultation with chambers of commerce, the existing publicity organization of Government be diverted to this purpose after the war.

There were doubts among some of the Chamber interests as to the capacity of Government machinery to promote an effective publicity campaign abroad, and interest in the project was necessarily influenced by individual prospects of future world markets, in relation to present restrictions and probable production capacity after the war. The major industries of jute milling, engineering and mining, however, gave it general support and were particularly in favour of centralized discussion on the organization of a publicity campaign with a view to recovering the ground lost because of war-time restrictions and securing world recognition of some of the long neglected aspects of Indian achievement. With regard to the methods to be employed, trade and industry were in the majority willing to place at Government's disposal suitable plans already formulated or in operation, for the widespread advertisement of the products of this country abroad and on the whole the Chamber thought it advisable to encourage the proposal that a preliminary discussion under this head be arranged.

Indian Companies Act: Use of the words "Chamber of Commerce."—The question of principle involved in the unrestricted use in India of the words "Chamber of Commerce" as the name or part name of companies trading for profit and having no purpose or constitution in common with chambers of commerce in the ordinary accepted sense of the term, was first raised at the annual general meeting of the Associated Chambers of Commerce of India in 1940. In the early phases of the war, Government had many other more urgent matters and vital adjustments to deal with and it was thought sufficient at that time to record the general agreement of the chambers that at some future date, when circumstances so allowed, Government should be advised to embody into the Indian Companies Act amendments designed to restrict the misuse of these words by a company seeking to register under the Act, on the lines of sections 18 (5) and 19 (3) of the United Kingdom Companies Act. Factual evidence of company registrations, wholly or in part, under the name "chamber of commerce" was provided by the Northern India Chamber in September 1944 to uphold their proposal that the Associated Chambers should now move Government to effect the necessary alterations in the Act. The misuse of these words was not only misleading but likely to be harmful, since the term chamber of commerce was associated the world over with the activities of a body of persons acting together as "a board or an association to protect the interests of commerce chosen from among merchants and traders in the city." These objects, the Association contended, were very different to those of an individual trading concern and Government were requested to rectify the matter in the mutual interests of all true chambers of commerce in this country.

Standing Sub-Committees.—The following standing sub-committee of the Chamber has been elected for 1945-46:—

Cotton Piecegoods and Yarn Sub-Committee.—Mr. G. J. Gardner (Kettlewell, Bullen & Co., Ltd.), Chairman; Mr. J. W. Anderson (Grahams Trading Co. (India) Ltd.); Mr. J. A. Edwards Evans (Hoare Miller & Co., Ltd.); Mr. A. L. Lyell (Shaw Wallace & Co.); Mr. A. G. Elder (Ewing & Co., Ltd.); Mr. R. Scotson (Anderson Wright & Co.) and Mr. K. Sundaram (The Bombay Co., Ltd.).

Vice-President of the Chamber.—To the Vice-Presidentship of the Chamber which fell vacant on the death of Mr. R. B. Lagden, O.B.E., M.C., Mr. H. D. Townend (Messrs. Shaw Wallace & Co.) has been elected.

Industrial Affairs Sub-Committee.—Sir Jehangir Ghandy, C.I.E. (Messrs. Tata Iron & Steel Co., Ltd.) accepted the Committee's invitation to fill the vacancy on the Industrial Affairs Sub- Committee caused by the appointment of the Hon'ble S. K. Sinha to be Regional Food Commissioner, Eastern Region.

Indian Chamber of Commerce, Calcutta

The following are extracts from the presidential speech of Mr. B. M. Birla at the latest annual general meeting of the Chambers held on Friday the 23rd March 1945:—

" A study of what has been recently achieved by other countries will suggest to us some of the steps which should be taken if greater production is to be translated from fancy to fact.

" First of all, a post should be created analogous to that of Chief of the War Production Board in the United States and held by a competent person with powers wide enough to ensure the achievement of results.

" Secondly, sufficient incentive should be provided for increased production and the burden which industry has to bear at the moment should be sufficiently lightened.

" I may, in this connection, refer to some of our most urgent needs.

" As you know, almost all the machinery which we need here has to be imported from abroad. This means that we have to bear packing charges, freight to the port of embarkation, port charges, ocean freight, insurance, landing charges in India, import duty and other handling charges. All these add to our cost by at least 30 per cent. This handicap has not to be borne by industries in England or other countries which, so far as their requirements of machinery go, are, more or less self-sufficient. Then most of the important industries in this country have to provide housing accommodation for their workers. In European countries with their large urban populations, there is not the same need of having to draw on rural man-power. Besides, what happens there is that if the population of a town increases, the local bodies, the insurance companies and the housing societies are able to provide accommodation for the workers, with the result that the industrial concerns have hardly to bother about any capital for such purposes. Here in India the case is quite different and every important industry has to solve the problem itself and to find money for the purpose which is as much as 10 to 20 per cent. of its total capital cost. The result is that, comparing like with like, our capital cost is 50 per cent. higher than in Europe. This constitutes for our industry a severe handicap. The British Government have allowed 20 per cent. of the cost to be written off out of profits before any tax is to be paid. Here in India unless about 45 per cent. of the total cost is allowed to be similarly written off, the handicap will remain and we shall not be able to compete with the foreign industries on equal terms. The Finance Member this year has allowed 20 per cent. of our machinery cost to be written off out of the first year's profit. But this will not provide the needed relief and remove the handicap. The allowance should be increased to 45 per cent. Then alone shall we find ourselves placed on a footing of equality with our competitors abroad.

" The existing level of taxation in this country which is only on the threshold of its industrial career is too high and stands in the way of any large expansion or advance. Those who are ahead of us in the race had not to start with a similar handicap, for the level was sufficiently low and industry had a sufficient margin left to it to provide the necessary incentive and encouragement. Here in India at present income-tax, corporation tax and dividend tax take away seven and three-quarter annas out of the rupee. In the case of individuals the rate of tax is fifteen and quarter annas in the rupee for income above Rs. 5 lakhs. Even in the lower category, out of an income of five lakhs of rupees one has to pay as much as Rs. 3,68,000 by way of tax. If we are at all anxious to increase our production, the incidence of taxation on industry has to be made much lighter than it actually is.

" If Government were to create favourable conditions by affording protection to industries in anticipation of their needs, I am sure, industrialization would be rapid and we could achieve the desired result in a very short time. What is urgently required in every direction is the creation of conditions favourable to increased production. This could be done through protection and through the provision of finance, technical advice and lower taxation, which all boils down to this, that the industries should have the backing of a really sympathetic Government.

" In order that the capital cost may be kept reasonably low, it should be possible to devise a scheme under which housing accommodation is provided by or with the help of the Government and the industries concerned are relieved of the obligation of building quarters for the workers and the staff. Capital invested for this purpose is sure to yield a reasonable return and even if it did not, the provision of such shelter is the least that a civilized society has got to do for the workers and the burden of the deficiency should be borne by it as a whole. But if the Government finds this difficult, then what it should do is to give loans to industries for workers' housing and charge interest at the same rate at which it is able to raise money in the open market. The industries will be responsible for the interest and all the loans could be amortised over a certain number of years. This will solve the problem of housing without saddling the industries with its cost.

" As regards technical advice, if it is not advisable within the country it has to be imported from abroad. I feel that without the help of proper knowledge and advice we would not be able to make much progress and, therefore, we should not grudge any expenditure incurred in connection therewith."

Indian Mill Finance

Working of Textile Companies

Modern Mills, Ltd., Bombay

(Agents : N. Sirur & Co., Ltd.)

The result of the company's operations during the year ended 31st October 1944 shows a profit of Rs. 38,51,683-2-9 which, with Rs. 44,661-10 brought forward from the previous year's account, makes a total of Rs. 38,96,344-12-9. From this sum the Directors have allocated to depreciation on buildings and machinery Rs. 3,20,000; provision for taxation Rs. 27,25,000; and reserve fund Rs. 6,50,000, leaving a balance of Rs. 2,01,344-12-9 which the Directors propose to dispose of as under:—Dividend of Rs. 5 per share and a bonus of Rs. 3 per share (free of income-tax) on 17,752 ordinary shares of Rs. 50 each, Rs. 1,42,016; and to carry to next year's account Rs. 59,328-12-9.

A sum of Rs. 8,50,000 has been transferred to the reserve fund from provision for taxation made during the last year which, together with the sum of Rs. 6,50,000 transferred from the profit and loss account this year, makes a total of Rs. 15,00,000 and is inclusive of the E.P.T. deposits already paid and of the provision for the deposits payable under the E.P.T. Act.

The property and stocks at the mills at Parel and Mahalaxmi are insured for the sum of Rs. 98,56,220 and the profits and standing charges for Rs. 70,00,000 for 24 months' benefit, that is, Rs. 35,00,000 annually. In addition the company's buildings, machinery, stock and stores have been insured against war risks as required by the Government of India ordinances.

New City of Bombay Manufacturing Co., Ltd., Bombay

(Agents : W. H. Brady & Co. Ltd.)

The working of the company for the year ended 31st December 1944 shows a gross profit for the year of Rs. 47,20,251-15-0 to which is added the balance brought forward from the previous year of Rs. 4,957-0-3 making a total of Rs. 47,25,208-15-3. Deducting therefrom the Managing Agents' commission of Rs. 4,72,025-3-1 a balance of Rs. 42,53,183-12-2 is left, which the Directors propose to dispose of as follows:—Reserve for taxation Rs. 31,90,000 ; depreciation on machinery, plant and furniture Rs. 1,61,496; transfer to reserve fund Rs. 6,60,000 ; and with the sanction of the shareholders to declare a dividend for the year ended 31st December, 1944 at the rate of Rs. 20 per share, free of income-tax, absorbing Rs. 2,40,000 and leaving a balance of Rs. 1,687-12-2, which they recommend be carried forward to next year's accounts.

The company's property, including buildings, machinery and stock, has been insured against fire and riot for Rs. 1,16,41,300. In addition, the company's buildings, machinery and stock have been insured against war risk in accordance with the Ordinance of the Government of India.

Profit and standing charges of the company have been insured for Rs. 60,00,000 to cover a maximum stoppage of 24 months, such insurance to run from the 3rd day of January, 1945 to the 2nd day of January 1946.

Azam Jahi Mills Ltd., Warangal.

(Agents : The Industrial Trust Fund, H.E.H. the Nizam's Government, Hyderabad)

The accounts for the year ended 30th Aban 1353 Fasli (corresponding to 5th October 1944), show a trading profit, subject to depreciation and taxation, of O.S. Rs. 41,49,778. Out of this the Directors have made the following allocation and appropriations :—Depreciation O.S. Rs. 3,50,000 ; provision for E. P. tax O.S. Rs. 10,75,000; provision of E. P. deposit (transferred to reconstruction and expansion reserve) O.S. Rs. 12,60,000 ; reconstruction and expansion reserve O.S. Rs. 7,50,000 ; workers welfare reserve O.S. Rs. 50,000 ; donation to Hyderabad Women and Children's Medical Aid Association O.S. Rs. 25,000 ; donation to Hyderabad Scientific and Industrial Research Board Endowment O.S. Rs. 60,000 and E. P. Tax provided short last year O.S. Rs. 16,672. This leaves a balance from this year's profits of O.S. Rs. 5,63,106 which together with Rs. 45,193 brought over from last year's accounts shows a total disposable balance of Rs. 6,08,299.

The directors propose to distribute this amount as follows :— Dividend at 20 per cent. and bonus at 10 per cent. both payable in the same warrant O.S. Rs. 5,40,000, donation to charities O.S. Rs. 20,000, and leaving a balance of O.S. Rs. 48,299 to be carried forward to next year's accounts.

During the year one of the Directors, Mr. G Raghunathmul, resigned from the Board.

The mills buildings and machinery have been insured against war risks and fire for B. G. Rs. 41,49,000 and the profit and standing charges of the company have been insured for B. G. Rs. 40 lakhs per annum, and stocks of cotton cloth, yarn and stores, for B. G. Rs. 1,30,93,000. The company has also been insured to cover the risks under the Workmen's Compensation Act.

Colaba Land and Mill Co., Ltd., Bombay

(Agents : W. H. Brady & Co., Ltd.)

The working of the company for the year ended 31st December 1944 has resulted in a net revenue from land and property account of Rs. 2,61,262-10-7 and mill profits of Rs. 38,55,093-9-3. Deducting from the total the amount of Managing Agents' commisssion of Rs. 3,95,959-13-9 and adding thereto the balance of profit from last year of Rs. 10,552-7-4 there is left a net profit of Rs. 37,30,948-13-5 which the directors propose to distribute as follows :— Depreciation on buildings and roads Rs. 70,865-14-10 ; depreciation on mill machinery, plant, etc. Rs. 1,28,303-6 ; provision for taxation Rs. 27,10,000 ; reserve fund Rs. 6,05,000 ; provision for improvement of flats Rs. 15,000 ; and with the sanction of the shareholders to declare a dividend for the year ended 31st December 1944 at the rate of Rs. 7 per share, free of income-tax, absorbing Rs. 1,96,000 and leaving a balance to be carried forward to next year Rs. 5,779-8-7.

A compulsory deposit amounting to approximately Rs. 6,05,000 has to be made to the Government of India.

The company's property including buildings, machinery and stock has been insured for Rs. 1,31,00,925 and the profit and standing charges of the company have been insured for Rs. 50,00,000 to cover a maximum stoppage of 24 months, such insurance to run from 3rd January 1945 to 2nd January 1946.

The company's buildings, machinery and stock have been insured against war risk in accordance with the ordinance of the Government of India.

Osmanshahi Mills, Ltd., Nanded

(Agents : The Industrial Trust Fund, H.E.H. The Nizam's Government, Hyderabad)

The accounts for the year ended 30th Aban 1353 Fasli (corresponding to 5th October 1944) show a trading profit, subject to depreciation and taxation, of B.G. Rs. 39,47,169. From this profit the Directors have made the following allocations and appropriations :—Depreciation B.G. Rs. 3,50,000 ; provision for E.P.T. B.G. Rs. 8,75,000; provision for E.P.T. deposit (transferred to reserve for reconstruction and expansion) B.G. Rs. 10,50,000; donation to Hyderabad Women and Children's Medical Aid Association B.G. Rs. 25,000 ; Hyderabad Scientific and Industrial Research Board Endowment B.G. Rs. 34,286 ; expansion reserve B.G. Rs. 7,50,000 and workers' welfare reserve B.G. Rs. 1,00,000. This leaves a balance from this year's profit of B.G. Rs. 7,62,883 which together with Rs. 9,429 brought forward from last year's account, shows a total disposable balance of B. G. Rs. 7,72,312. The Directors propose to distribute this amount as follows :—Dividend at 10 per cent. and bonus at 5 per cent. both payable on the same warrant B.G. Rs. 7,50,000 and donation to charities B.G. Rs. 20,000, leaving a balance of B.G. Rs. 2,312, to be carried over to the next year's accounts.

From the 8th September 1944 the new Hyderabad Factories Regulations came into force and the company had consequently to reduce the working hours from ten to nine per shift and had to increase the wages in proportion. The effect of this is not apparent in this year's working but will show in subsequent years.

It has not been possible to proceed with the workers' housing colony as quickly as had been hoped owing to the difficulty in obtaining building materials. The work is being put in hand as quickly as possible and it is hoped that during the coming year progress will be made.

The mill buildings and machinery have been insured against war risks and fire for B.G. Rs. 46,47,500, the profit and standing charges of the company have been insured for B.G. Rs. 40,00,000 per annum, and stocks of cotton, cloth, yarn and stores, for B.G. Rs. 1,52,17,000. The company has also been insured to cover risks under the Workmen's Compensation Act.

Empire Dyeing and Manufacturing Co., Ltd., Bombay

(Agents : W. H. Brady & Co., Ltd.)

The working of the company for the year ended 31st December, 1944, shows a net profit, after writing off depreciation on machinery and plant, etc., Rs. 1,44,746-7-9, setting aside Rs. 3,50,000 for taxation, and charging the Managing Agents' commission amounting to Rs. 71,462-12-0, of Rs. 1,47,919-10-1 which together with the balance brought forward from last year's account of Rs. 19,875-9-4 gives an amount for disposal of Rs. 1,67,795-3-5. Out of this sum the directors declare, with the sanction of the shareholders, a dividend for the year ended 31st December 1944 at the rate of Rs. 2-8 per share, free of income tax, on the shares held at the time of the recapitalization, namely, the 27th March 1944 and a like amount *pro rata* on the further issues of shares which rank for dividend from the respective dates of allotment absorbing Rs. 48,898, transfer to reserve fund Rs. 1,00,000, leaving a balance to carry forward to next year's account of Rs. 18,897-3-5.

The company's property, including building, machinery and stock has been insured against fire and riot for Rs. 53,68,000. In addition the buildings, plant and machinery have been insured against war risks (factories) insurance under the Government of India scheme.

The profit and standing charges of the company have been insured for Rs. 4,00,000, such insurance to run from 31st March, 1944 to 31st March, 1945.

New Great Eastern Spinning & Weaving Co., Ltd., Bombay

(Agents : W. H. Brady & Co., Ltd.)

The working of the company for the year ended 31st December, 1944 shows a gross profit of Rs. 44,51,931-10-6 to which is added the balance brought forward from the previous year of Rs. 28,707-9-2 making a total of Rs. 44,80,639-3-8. Deducting therefrom the Secretaries' and Agents' commision of Rs. 2,54,416-2-3, an amount of Rs. 42,26,223-1-5 is left which the Directors propose to dispose of as follows:—Provision for taxation Rs. 30,36,000 ; depreciation on buildings Rs. 60,200 ; depreciation on machinery and plant Rs. 1,32,394-9-9 ; depreciation on furniture and fittings Rs. 1,500 ; transfer to reserve fund Rs. 6,50,000 ; payment of dividend on 5½ per cent. cum preference shares for the year 1944 (subject to income-tax) absorbing Rs. 44,000 ; payment of dividend on ordinary shares at Rs. 20 per share, free of income-tax, for the year ended 31st December 1944 absorbing Rs. 3,00,000, and leaving a balance of Rs. 2,128-7-8 to be carried forward to next year's accounts.

A compulsory deposit amounting to approximately Rs. 6,90,000 has to be made to the Government of India.

A donation of Rs. 4,940 was given to the Department of Chemical Technology of the University of Bombay as also Rs. 2,500 to the Indian Red Cross Fund.

The company's property, including buildings, machinery and stock, has been insured against fire and riot for Rs. 144,71,000. The company's stock and mill buildings and machinery have been insured against war risk in accordance with the ordinance of the Government of India.

The profit and standing charges of the company have been insured for Rs. 60 lakhs to cover a maximum stoppage of 24 months, such insurance to run from the 3rd of January, 1945 to the 2nd of January, 1946.

NEWS OF THE MONTH

Indian

Indian Chemical Manufacturers' Association: Bombay Presidency Branch.—The Bombay Presidency branch of the Indian Chemical Manufacturers' Association has been recently opened at Currimbhoy House, Outram Road, Fort, Bombay.

Indian Institute of Art in Industry.—Arising from the interest stimulated by the "Art in Industry" movement, an Indian Institute of Art in Industry has now been formed at Calcutta. The Institute hopes to become the central guiding force in the application of the country's art to industry, and is expected to have a revenue of over Rs. 5,00,000 to carry out its programme.

30 Million Sandbags for America.—The War Production Board, Washington, announced that 30,000,000 surplus sandbags will be released by the Government of India for shipment to the United States, under newly completed arrangements.

Arrangements have been made with the Office of Price Administration to establish dollar and cent prices based on lower cost since India-imported bags and sheets cost less than the present market value of goods from which bags were made, thus allowing a reasonable margin for handling.

New Cadre of Indian Trade Commissioners.—A separate cadre of Trade Commissioners specializing in India's trade with foreign countries is being created.

This is one outcome of the visit to the U.K., U.S.A. and Canada of Mr. N. R. Pillai, the Commerce Secretary, who has returned to New Delhi. He has studied at first hand the problems of commercial intelligence. A large number of Trade Commissioners will be appointed in various parts of the world. The cadre is being created to train the necessary personnel, says *Capital's* New Delhi Correspondent.

Sir A. Dalal's Visit to Britain : Scope of Mission.—The Hon'ble Sir Ardeshir Dalal, Member for Planning and Development, Government of India, proceeded to the United Kingdom towards the end of last month, accompanied by Mr. H. V. R. Iengar, I.C.S.

Sir Ardeshir Dalal's visit is not connected with the visit of the industrialists to the United Kingdom. He will discuss with His Majesty's Government some problems connected with the post-war economic development of India, particularly in the industrial field, and make himself acquainted at first hand with the situation regarding the availability of capital goods and expert advice as well as the training of Indian students and technicians.

Temporary Tariff Board Proposed.—It is reported that the Government of India proposes to set up a temporary Tariff Board provided the number and nature of claims for protection justified the setting up of such a Board. The Government of India recently announced that they would be prepared to consider claims from war-time industries, which were established on sound lines, for assistance or protection during the transition period. The Tariff Board, it is explained, could not be set up, if these claims are few in number or if the demand for protection relates to the post-war period. The industries demanding protection will have to make out a *prima facie* case that they

Textile Calendar

MAY

11th, Friday :

Indian Merchants' Chamber, Bombay, First Quarterly General Meeting.

21st, Monday :

Shree Niwas Cotton Mills Ltd, Ordinary General meeting.

JUNE

9th, 10th and 11th, Saturday, Sunday, Monday:

First Session of the Bombay Provincial Handloom Weavers' Conference, Sholapur, Mr. N. M. Joshi, M. L. C., presiding.

were being hit by the relaxation of war-time controls and that foreign competition, even during war-time, was preventing their establishment on a stable basis.

Twelve Students for Overseas Study : Tata Scholarships.—Twelve students from five Indian Universities have been awarded scholarships for higher education abroad from the J. N. Tata Endowment in the current year. Six of them will go to the U.K., and the rest to U.S.A. Engineering and chemistry seem to be the subjects most favoured by the students. The names of the students are:—Mr. R. B. Contractor (Bombay University), Mr. D. F. Vasunia (Bombay), Mr. Minocher K. Patell (Benares Hindu University), Mr. K. I. Narasimham (Bombay), Mr. G. C. Basak (Calcutta), Mr. K. A. Balakrishna (Bombay), Mr. S. K. Mohile (Bombay), Mr. M. V. Kamath (Madras), Mr. S. K. Chakravarty (Calcutta), Mr. T. K. Cherian (Benares Hindu University), Mr. P. Sankara Murthy (Madras), and Mr. O. Talibuddin (Lucknow University).

" Art in Industry " Scholarship Awarded to Bombay Teacher.—The General Secretary of the " Art-in-Industry " Exhibition announces that the scholarship for the first Indian commercial art teacher to be sent to England for a year's advanced tuition has been awarded to Mr. V. N. Adarkar of the Sir J. J. School of Art, Bombay.

The Sir J. J. School claims to have the largest commercial art section in India, and its students won many prizes at the 1945 " Art-in-Industry " exhibition held in Bombay. Mr. Adarkar is the deputy to the Director of the school, and also acts as the Superintendent of the commercial art section.

The " Art in Industry " Exhibition has made available Rs. 3,500 towards the cost of his scholarship, and the Government of Bombay, who are participating in the scheme, will contribute the balance.

Dr. Alagappa Chettiar's Further Donation for the Madras College of Technology.—Dr. Sir A. Lakshmanaswami Mudaliar, Vice-Chancellor of the Madras University, and the members of the University Commission, visited Alagappanagar, Cochin State, on 18th April and the guests were received on arrival by Dr. Rm. Alagappa Chettiar of the Cochin Textiles Ltd.

Dr. Alagappa Chettiar handed over to the Vice-Chancellor a sum of Rs. 2 lakhs, being his additional promised contribution for the opening of a College of Technology in the Madras University.

The guests were entertained to tea and Dr. Sir Lakshmanaswami Mudaliar, in acknowledging the gift from Dr. Chettiar, expressed to him thanks, both on behalf of those present and also the other authorities of the University, for his continued munificence. He said that he had received Rs. 3 lakhs last year and a sum of Rs. 2 lakhs that day. He added that Dr. Alagappa was the largest single contributor to the University and he was virtually the founder of the Faculty of Technology in the University. He could compare Dr. Alagappa Chettiar's munificence only to that of the House of Tatas.

Post-war Textile Demand : Beyond India's Capacity.—Demand for Indian textile products from liberated countries of the Far East that may be beyond India's capacity to supply is seen by a trade's expert writing in the *Manchester Guardian.*

" Colonial and other territories of European countries in the Far East that have been overrun by the Japanese unlike India, China and Japan, have between them very little textile productive capacity," he writes.

" Taking these territories as a whole, moreover, a very considerable proportion of textile imports in the last few years before the war came from Japan, though in one place and another large quantities were also obtained from the United Kingdom, Holland and India.

" Of these four pre-war suppliers, Japan is unlikely to resume its trade at least for a long time. Holland has at present little or no production, while the United Kingdom so far has been able to provide only a small amount of cloth from stock.

" There remains India, which, from its geographical position and from the nature of its textile production, is perhaps the most suitable source of supply. But in the present circumstances it seems doubtful if it will be able to meet all the demand which will arise as various territories are liberated."

Proposed Technological Institute for India : Committee Personnel.—The Government of India have appointed a committee to consider the establishment of a high grade technological institute in India, possibly on the lines of the Massachusetts Institute of Technology, to provide advanced instruction and training in technology.

The Committee consists of Mr. N. R. Sarker, representing Calcutta business interests, as Chairman; Mr. A. D. Shroff, Bombay (industrialist); Mr. W. W. Wood, Principal, Delhi Polytechnic (technical expert); Sir J. C. Gosh, Director, Indian Institute of Science (scientist); Dr. Nazir Ahmad, Director, Technological Laboratory, Bombay (scientist); Sir S.S. Bhatnagar, Director, Board of Scientific and Industrial Research, Delhi (scientist); Mr. C. E. Preston, Hyderabad (technical expert); Sir Frederic Tymms, Director, Civil Aviation (technical expert); Mr. S. Lal, Additional Secretary, Labour Department (labour interests); Mr. W. W. Ladden, Madras (business man); Dr. A. H. Pandya, Supply Department (technical expert); Dr. M. D. Parikh, Delhi Cotton Mills (technical expert); Mr. J. K. Srivastava, New Victoria Mills, Cawnpore, (industrialist); Dr. John Sargent, Educational Adviser to the Government of India; Mr. H. K. Kripalani, Industrial Adviser to the Government of India; Major-General D. R. Duguid, M.G.O.'s Branch (technical interests); Brigadier R. D. T. Woolfe, Controller General of Inspection, M.G.O.'s Branch (technical expert); Mr. W. G. W. Reid, Railway Board, Director of Mechanical Engineering (technical expert); Mr. P. J. Edmunds, Chief Engineer, P. and T. (technical expert); Mr. Dharma Vira, Deputy Secretary, I. and C. S. Department; Sardar Bahadur Sir Sobha Singh, New Delhi (business man); Mr. G. L. Mehta, Calcutta (of Scindia Steam Navigation Co.) (business interests); Dr. K. Venkataraman, head of the Department, and Prof. of Chemical Technology, Bombay University (technical expert).

Foreign

Woollen Cloth for India.—A quantity of British Government surplus stocks of woollen cloth will be sent to India through normal trade channels as the result of a decision by the Board of Trade, which has asked the National Wool Textile Export Corporation to co-operate in arranging export.

Another Art-Silk Factory in South Wales.—The report that a factory for spinning and processing nylon yarn is to be established at Pontypool will no doubt be regarded as good news in South Wales, and, as one of the largest rayon factories was established some years ago at Flint, it appears that Wales will become more important in the British artificial textile industries.

New Swedish Textile Institute.—In Goteberg in Sweden there recently was laid the cornerstone of a new Swedish Institute for Textile Research, which will work closely with the Chalmers Technical College of the same city. It is expected to be in full operation about 1st July 1945. Among other things, the Institute will examine the shrinkage produced in different textiles by varying degrees of moisture, pressure, and temperature, particularly in such materials as fibre-wool and rayon.

Steady Increase of British Dyestuff Exports.—British exports of the group "chemicals, drugs, dyes, and colours" during 1943 were valued at £27,531,109, compared with £23,754,997 in 1942 and £22,060,176 in 1938, according to statistics recently released by the Board of Trade in England. These are the first details of British wartime export trade that have been made available since 1940. Included in these totals are exports to the United States under reciprocal aid.

"Ministry of Textiles" Suggested.—The suggestion that a separate Ministry for the Textile Industry in England should be established will be made at the annual delegates conference of the United Textile Factory Workers' Association at Blackpool this month. It is proposed that a joint application be made to the Government by the textile industries, including cotton, rayon, woollen, jute and hosiery trades, for the setting-up of such a Ministry.

Cloth Shortage Feared in U.S.—Numerous interested Government quarters privately estimate that the 1945 cotton textile production in the United States will be under 9,000 million linear yards compared to nearly 10,000 millions in 1944, and about 11,000 millions in 1942, largely due to continued drop in manpower.

Military needs of 1945 are estimated at 2,500 millions and relief needs 500 millions. Hence experts believe that minimum total needs will amount to 10,000 millions, leaving an anticipated one billion yards shortage.

Improving Technical Efficiency in Woollen Manufacture.—To improve technical efficiency in Australian woollen manufacture, the Australian Government has decided to spend more than £100,000 to establish special textile training schools, and to allocate £250,000 for the provision of modern plants for higher textile training.

The Australian Prime Minister has said that specially trained teachers, with the best possible qualifications, will be appointed to the teaching staffs. Inducements will be offered to trainees from junior schools to take textile technical training and special payments will be made to students completing courses. Valuable industrial scholarships will also be made available.

New War-Production Board in China.—A Chinese War Production Board modelled after the American one, is proving a new milestone for China's textile industries.

The establishment of the new Board, which has taken charge of the entire industrial output of Free China, is the outcome of two recent visits to China of Mr. Donald Nelson, former Chairman of the U.S. W.P.B.

It is the aim of the new organization to secure an improvement in manufacturing processes in order to improve efficiency and to increase production, according to a statement by Dr. Wong Wen-hao, the Minister of Economics.

Dr. Wong said that the strengthening of China's textile industry is needed not only for the prosecution of the war, but also for relief and the revival of post-war trade.

Platt Bros. Post-war Prospects.—The post-war demand for textile machinery is expected to be so large that many thousands of extra workers will be required by Messrs. Platt Bros. Ltd., of Oldham, England, and the other associated companies in the Textile Machinery Makers Ltd.

Figures have appeared in some newspapers to the effect that 20,000 additional workers will be required. When Platt Bros. were inquiring about taking over the big factory at Squires Gate, Blackpool, it was then suggested that work could be found for between 20,000 and 30,000 there.

Whatever extensions are made to the present works, either in Oldham or elsewhere, it is certain that a big increase in employees will be necessary to cope with orders already placed and expected, says the *Oldham Chronicle*.

While home orders are expected to be very large when the re-equipment programme does start, apart from these, the export trade will be considerable.

Water-repellent Cotton Finishes.—Do you think of waterproof and water-repellent finishes as only good for rain wear? Then you've a surprise coming, says the Cotton Textile Institute, U.S,A. which predicts that water-repellent cotton fabrics will appear in new and improved guises after the war to provide as yet undreamed of wonders for consumers.

For instance, street clothes for men and women, hats, shoes, stockings may have a water-repellent finish to make them resist water, dirt and stains. Playsuits, kitchen aprons, house-dresses, in addition to more umbrellas, children's clothes, snow and ski suits and other types of sport clothes will be likewise treated. For the house, such items as slip-covers, upholstery, curtains, draperies, tablecloths, bedspreads, wall coverings, and rugs may have such finishes so they can be cleaned by a flick of a damp cloth. Policemen and other outdoor workers can have their street wear treated, so that if they happen to get caught in a shower the water rolls off and there is no danger of them catching cold.

Grants for Research to Leeds University.—At its last meeting, the Council of the University of Leeds, England, accepted a further generous gift from Mr. Charles Brotherton of £1,000 for the purchase of equipment for research in the Department of Textile Industries, and the offer by Brotherton & Co., Ltd., of £1,000 a year, for a period of not less than seven years, for the establishment of a Brotherton

Research Lectureship in Physical Chemistry in the same department.

Physical chemistry has been chosen as the field in which the new member of the staff should work, because of the rapid advances which have already been made in this field in relation to polymerization processes and the production of high polymers, which include textile fibres. Not only so, but polymerization processes seem likely to form the basis of important developments in the finishing of textile materials in the years after the war.

The Council also accepted with grateful thanks the following grants for research: £300 for one year from Imperial Chemical Industries, Ltd. (Dyestuffs Division), in support of Professor Evan's work on the thermo-dynamic properties of polymers; £500 from the Worshipful Company of Feltmakers of London for work in the Textile Department on wool and fur.

Practical Tests in Spinning Mills in England.—The Post-war Committee of the Cotton Board, believing that an early start on experiments and investigations in the field of new machines, new methods of mill staffing and simplification of wage rates is vitally important, has decided to invite offers from the industry to make a mill or mills available for practical tests. The conditions attached to these experiments are:—

(1) The character of the new methods to be tried out shall receive the prior approval of a committee appointed by the Board, on which are to sit equal numbers of representatives from the spinning trade employers and operatives' organizations, while representatives of the textile machinery industry and the Shirley Institute are to be invited to attend in the capacity of expert advisers.

(2) During the experiments departures are to be made from existing recognized practices, provided the operatives have no reduction in earnings and are not obliged to work under the new arrangements without right of appeal to the committee.

(3) The tests are to be recorded in detail to the Board and the employers' and operatives' organizations.

(4) Practices in the mill are to revert to normal after the tests unless the employers and operatives agree otherwise.

After the experiment has been set on foot in the spinning section the committee intends to turn its attention to tests in the manufacturing section.

The King and Queen Visit Textile Towns.—During their tour of Lancashire in March 1945 the King and Queen visited the textile towns of the county. Accrington, Bolton, Burnley, Haslingden, Ramsbottom and Rochdale were among the cotton towns visited, the tour concluding in Manchester. They were shown models of the latest types of spinning machinery with which, it is claimed, the industry can confidently face "all comers" after the war.

In the largest cotton mill in the Empire, the Dunlop Cotton Mill at Rochdale, they saw cotton cord being manufactured for bullet-proof tyres for armoured cars and the latest types of cotton spinning plant were also shown to them when they visited the works of Howard and Bullough, Ltd., at Accrington. It was here that Squadron-Leader P. A. Rippon received from the King his D.F.C., which had been awarded to him last December in recognition of "gallantry and devotion to duty in the execution of air operations." Sq.-Leader Rippon was formerly employed at the factory. He is a son of Mr. A. W. Rippon, Managing Director of Platt Bros., and Chairman of Textile Machinery Makers, Ltd.

Sir Walter Preston, President of Textile Machinery Makers, Ltd., was presented to the King and Queen. Their Majesties also received heads of the various departments and workers, Mr. James Redman (Chairman of the firm), Mr. W. A. Walsh (Works Director), and Mr. N. Entwistle, Superintendent of Stevenson Street Works.

Ethiopia's Cotton Textile Requirements.—Before the Italian invasion, Ethiopia imported an average of 7,000 tons of cotton piecegoods and cotton yarns annually, which accounted for three-fourths of the total value of imports. Jute sacks averaged about 500 tons.

In 1942, cotton goods amounted to 5,090 tons, out of total imports of 13,591 tons, according to an African publication. In the following year, cotton goods represented only 3,756 tons out of 54,321 tons.

Aden is the principal source of imports of cotton textiles. After January 1943, definite quotas were allotted by the Middle East Supply Centre, although all articles manufactured in India, such as cotton goods, continued to come through the usual channels. Prices of cotton goods advanced sharply until export prices were placed under control by the Indian Government and returned to a more proportionate level.

Improvements in communication are expected to develop heavy increases in imports of cotton cloth, but the inhabitants may demand warmer and more durable clothing.

Good quality, long-staple cotton was raised by the Italians, and in 1938 about 900 tons were exported to Italy. If properly developed, this may constitute a valuable export item. In 1944, cotton was selling for 3 shillings a kilogramme unginned, in Addis Ababa, and domestic supplies are supplemented by imports from the Sudan.

About 500 tons of grey sheeting and yarn are produced yearly in a well-built cotton mill in Dire Dawa. The mill is equipped with modern machinery, including 9,660 spindles and 299 looms, but supplies less than 3 per cent. of domestic requirements. It is believed in Ethiopian trade circles that an additional cotton mill would be desirable.

Textile Machinery Makers Acquire Interest in Prince-Smith and Stells Ltd.—Negotiations have been completed recently, whereby a majority share holding in the old-established and world-famous Keighley textile engineering business of Prince-Smith and Stells Ltd. will be acquired by the four largest shareholders in Textile Machinery Makers Ltd. These companies were originally four of the largest and most prominent makers of cotton and other types of textile machinery in Lancashire, who some fourteen years ago transferred their manufacturing assets, along with other companies engaged in a similar trade, to Textile Machinery Makers Ltd., and who, therefore, as holding companies are still very largely interested in the textile machinery industry. Each of these four companies is represented on the Board of Textile Machinery Makers Ltd.

Prince-Smith and Stells Ltd. is one of the last large textile machinery companies in England to cease to be privately owned. Like so many of the great industrial enterprises, it has achieved world-wide repute from a very humble start. It is interesting to note at this juncture that it will celebrate its 150th birthday during the present year, having been founded in 1795 by Mr. William Smith, the great-great-grandfather of its present Chairman of Directors. The present company was formed in 1931 to amalgamate the two well-known businesses of Prince-Smith and Son Ltd. and Hall and Stells Ltd., the latter firm having been founded about the middle of the last century by three foremen of the parent firm who decided to start in business on their own account. The history of the four purchasing companies is very similar, says *Textile Mercury and Argus*, each having been started as a small family concern in the early years of the industrial revolution.

Fifty Years Ago

(From the *Indian Textile Journal*, May, 1895)

Our Japanese Rivals

"It would appear to be now only a question of time when our shipments of cotton yarn to Japan at least must cease, and that enterprising country seems to be within measurable distance of becoming a formidable rival of ours in the China market."

Selecting Mill Managers

"In the matter of engaging Europeans for Indian mills a new practice has of late years sprung up. The photographs of the most likely candidates are forwarded by the English firm entrusted with the delicate duty of selection to the mill agents in Bombay, who, if they distrust their skill as physiognomists, hand over the pictures to an astrologer or *peer* for diagnosis and report. The man with either a natural or acquired up-tilted nose will wish that he had never been photographed, because however good a carder, spinner or weaver he may be, he will certainly be repelled as pugnacious !"

The Indian Textile Journal

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55 th Year

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EDITORIAL

Depreciation Allowances

IN his latest budget speech Sir Jeremy Raisman announced that the excess profits tax would continue for another year at the same rate as before together with the scheme of compulsory deposits. At the same time he announced Government's proposal to grant special initial depreciation allowances of 20 per cent. on new plant and machinery and 10 per cent. on new buildings erected after 31st March 1945, which would be in addition to the usual depreciation allowances and would not be deducted in arriving at the written-down value. The object was to provide encouragement for the early re-equipment of industry. Nothing more has since been heard of these allowances. A similar official proposal before the British Parliament provided that it " shall come into effect on an appointed day to be fixed by Parliament." One wonders whether, in view of the foregoing, the Financial Department has thought it best to mark time in the meanwhile.

That the allowances, as announced, are pitifully inadequate for the cotton mill industry errs on the side of under-statement. Even so, the delay in putting them into effect may have serious consequences because of the imperative need for increasing cotton textile production by all possible means. Extraordinarily heavy wear and tear of spindles, looms and other machinery has been caused by multiple-shift working and replacements on a large scale are overdue. Increased multiple-shift working may result in very considerably increased production, but that involves an assured supply of fuel and labour and a promise of adequate depreciation allowances. As it is, the figures of multiple-shift working tell their own tale and are capable of improvement; during February 1945, of the total number of looms installed, 7.31 per cent. were not working at all, 22.8 per cent. were working one shift, 68.06 per cent. two shifts and 1.83 per cent. three shifts. Of the total number of spindles installed, 7.73 per cent. were not working at all in February 1945, 16.2 per cent. were working one shift, 68.77 per cent. two shifts and 7.3 per cent. three shifts. The demand has, therefore, been persistently made for liberal additional depreciation allowances for the extra wear and tear caused by multiple-shift working. There is evidence, on the other hand, that the present taxation policy does not encourage the accumulation of adequate depreciation reserves for financing programmes of rehabilitation and re-equipment. It has been shown, on an examination of the consolidated profits for the last six years of six prominent mills in the Bombay Presidency, that, in spite of the huge profits they have been making, the net cash at their disposal in 1944 was only Rs. 151 lakhs or 14 per cent. of the present replacement value of their plant and equipment. In regard to the railways, on a realization of the inadequacy of the present depreciation allowances to replace plant and machinery at prices which are expected to be ruling for many years after the war, Government have allowed them to increase their depreciation fund to Rs. 4 crores. Increased depreciation allowances for the cotton mill industry should, on the other hand, easily result in larger production through working longer hours. Clearly, therefore, a revision of the depreciation schedule is indicated, if official awareness of the urgency of increasing cloth production is at all to materialize.

Industrial Progress

THE Royal Institute of International Affairs, which is a non-political and unofficial body founded in 1920 to encourage and facilitate the scientific study of international questions, published recently a useful booklet on industry and trade.* Precluded as it is by the terms of its Royal Charter from expressing an opinion on any aspect of international affairs, the views contained in this booklet are necessarily those of the writer, but the survey he has attempted is quite an objective one. It sets the current and recent industrialization of overseas countries in perspective as a phase in the general economic development of the world, broadly shows how it is likely to develop in the future, and examines some of its implications as regards the pattern and volume of world trade in general and the trade and welfare of the United Kingdom in particular.

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* "Industrialization and Trade." By A. J. Brown. Oxford University Press, Bombay, Price: 2s. net.

Regarding the effects of oversea industrialization, the Balfour Committee admitted that the immediate effects would be to restrict the export trade of Britain and of other older manufacturing countries, but this is subject to some mitigating factors, e.g., the tendency of the newly developed manufactures of overseas countries to be of a simple and coarse nature, the additional demand for plant and material created by the establishment of industry, the extra purchasing power for finished industrial goods of all kinds to which it gives rise, and the stimulus it gives to primary enterprise elsewhere and, hence, indirectly, to the demand for industrial products in other quarters.

Summarizing the results of oversea industrialization from the point of view of the rest of the world, the writer enumerates three of them: a decrease in supplies of primary products, an increase in the demand for capital goods and, most probably, a decrease in the demand for finished consumable goods of many kinds. Industrialization in the poorer peasant countries like India should naturally lead to an increase in their total demand for imports, but the nature of this total would change. The demand for plant and equipment will greatly increase as also that for durable consumer goods like motor cars for the use of the wealthier classes of the population which industrialization will cause to increase. On the other hand, goods like the cheap clothing imported by these agricultural countries, the total demand for which will also be greatly increased by the improvement in the general standard of living, will tend to be the first product of the new factories.

The author comes to the general conclusion that industrialization in the poorer and more over-populated countries is likely to have an expansionary effect on world trade as a whole, but industrialization in those countries which have become rich while specializing on primary production may tend to produce the opposite effect for some time at least. As to the general composition of world trade, it would appear that the importance of capital goods would increase relatively to that of consumer goods, partly because of the increased demand for them which industrialization brings and partly because the goods which the industrializing countries will produce for themselves, instead of importing them, will probably be consumer goods rather than capital goods.

So far as England is concerned, she would find the demand for her exports changing and perhaps diminishing as the result of industrialization overseas. The author shows clearly how the changes in the structure of England's export trade accord with his generalizations regarding the results of industrialization abroad. He summarizes these changes as follows:

British export trade, which has already changed very drastically in composition and direction in response to industrialization abroad, will demand further changes in the nature of the exporting industries, and the making of new trade contacts, especially in those countries whose trade will be increased by industrialization.

Incidentally, the author explodes the bogey of starvation and unemployment in England as the result of a diminution of her exports. He observes: " Though the impact on our real income of a drastic decline in the demand for our exports may be widely different according to the measures which are taken to meet it and the responses which these measures evoke abroad, that impact is not likely to be such as to make the difference between starvation and plenty for the nation as a whole; it would convey a truer impression of it to say that, at the worst, it may bring the average standard of living down from that of a good to that of a bad pre-war year." In a sensible letter on this subject to *The Times*, Mr. George Wansbrough observes:

" Let us do all we can to help India industrialize itself, for what we lose in the export of simple manufactures we shall lose whether we help or not, and if we help we shall more than make good the loss by the export of more specialized products."

Photo : Hamilton Studios Bombay

An interesting group taken on the steps of the Bombay Town Hall on the occasion of Mr. D. M. Passmore's retirement showing the heads of the organization and senior members of the staff of the office of the Textile Commissioner, Department of Industries and Civil Supplies, the Government of India, Bombay.

Educated in England with the object of becoming an agriculturist, Mr. Passmore took the B.Sc. degree in Agriculture from the Reading University at London and arrived in India in October 1922 *to join the firm of Binny & Co. (Madras), Ltd. as his father was a well-known minister of religion in Madras. Mr. Passmore was appointed a Director of the firm in January* 1934 *and immediately on the commencement of the war in Europe he joined the Supply Department of the Government of India in October* 1939 *in charge of cotton and woollen textiles, jute, leather, silk, etc. Mr. Passmore's work on the Cotton Textile Directorate at Bombay from October* 1941 *has been outstanding, although he himself has always been far too retiring and self-effacing in his ways. The sympathetic appreciation specially written for this* Journal *by no less a person than Mr. T. Maloney—whose office room at the Textile Directorate for very nearly two years was adjoining that of Mr. Passmore's—should give our readers a fair idea about Mr. Passmore's abilities and his work.*

Mr. D. M. Passmore, C.I.E.

An Appreciation—by T. Maloney, M.C., A.M.C.T.

I DO not remember actually meeting D. M. Passmore until early in 1940, when he was in charge of what seemed to be almost a one-man department on the "Planning" as distinct from the "Purchasing" side of the Indian Stores Department—Textile Branch. Until then he had only been a name which I connected with the firm of Binny, agents of the Buckingham and Carnatic Mills, Madras, and the Bangalore Cotton, Woollen, & Silk Mills. But after being in his company for half an hour or so I realized that to all intents and purposes he was the "Planning Department" and that his immediate superiors—Sir Robert Targett (then Mr. R. W. Targett) and Brigadier E. Wood (now Lieut.-General Wood but always "Lakri" to his intimates) relied on him implicitly and delegated great responsibilities to him. I cannot remember what his exact designation was in those days, but that does not very much matter. In the numerous organizational re-arrangements which have taken place since 1939 as far as textiles and munitions supplies were concerned Passmore's designation has changed repeatedly but since joining the Government of India he has always been head and front and organizing force as far as supplies of cotton yarn and cotton textiles for Government were concerned.

He joined the "Supply Department" about a month after war broke out, having been lent to Government by Messrs. Binny & Co. and the man, like the firm from which he came, has since that time devoted his entire energies to the great task of winning the war by overcoming the many and varied textile supply problems which have constantly arisen.

During a period of five and a half years I do not think he has ever taken a holiday; day after day, including Sundays, week after week, and year after year, you could always be certain of finding Passmore at his desk, wrestling practically unaided with the latest difficulties caused by the constantly increasing and repeatedly changing demands for cotton goods. His office might be closed but Passmore was always there working at prodigious speed, setting down in his bold but almost undecipherable handwriting, or dictating without hesitation, lucid directions and plans for the solution of a vast array of what at first glance seemed insuperable difficulties.

In the 18 months or so when Col. L.J.L. Addison as Controller of Purchase and I, as Director of Textiles, were associated with him in the newly formed Cotton Textile Directorate with its head office in Bombay, the running contract system at fixed prices was substituted for the tender system as far as all major war demands for textiles were concerned; imports, distribution and prices of mill stores, chemicals, dyestuffs and sizing materials were effectively controlled; supplies and distribution of raw cotton for all mills and yarn needed by contractors for tentage and other made-up goods were effectively regulated; the output of normal khaki materials, canvas and dosuti for tentage were stepped up by ingenious improvization to figures hitherto considered impossible, the total purchases of war cloth were increased by several hundred per cent. and in 1942 touched the enormous figure of 11,000,000 yards; and the embryonic staff of about 150 clerks with which the Bombay office was started had been increased to something like 600 and had become tolerably efficient. During this period Passmore seldom put in less, and often more than, 12 hours' concentrated work every day and yet everything he did was first class. His output of work was enormous but by the end of 1943 he must have had the very great satisfaction of knowing that as far as war supplies were concerned the mill industry had been effectively geared to the highest damands the war was likely to impose and that the Directorate had developed from a creaking affair into an efficient business organization capable of dealing promptly with any demands made upon it; and that his genius and drive had been largely responsible for achieving this result. Round about this time life for him must have been rather grim but he never turned a hair even when through an inexplicable, though temporary oversight, his undoubted claim to promotion from Assistant Director to Deputy Director-General had been overlooked. He just carried on giving of his best. The oversight was quickly remedied and in 1944 he was given the C.I.E. in recognition of his outstanding services.

After all the major problems connected with the planning of war supplies of cotton textiles had been solved, the Government of India transferred the Cotton Textiles Directorate "lock, stock, and barrel" to the newly created Department of Industries and Civil Supplies and the Office of the Cotton Textile Commissioner with Mr. Vellodi as Textile Commissioner became responsible for solving the problems of civil as well as war supplies of cotton goods. Passmore from that time onwards in his capacity as Additional Commissioner of Cotton Textiles took a leading part in organizing the vast and delicate mechanism which has made it possible for the Indian cotton textile industry to supply thousands of millions of yards of standard cloth at reasonable and controlled prices for the civil population and vast quantities of specialized materials required for war purposes.

From the time when Sir Homi Mody, K.B.E., in his capacity of Minister of Supply, laid down the policy of obtaining war supplies from the Cotton Industry under a system of voluntary co-operation, the Cotton Textiles Directorate and later on the Office of the Textile Commissioner have always had associated with them Committees and Sub-Committees with extensive powers for dealing with particular aspects of supply, distribution and production problems. These committees achieved astonishing successes over an extremely wide field covering supplies of raw materials, mill stores, machinery, chemicals, etc.; cloth and yarn price fixation; and the marketing of finished products, but each and all of them would certainly admit that the results they have obtained and the harmony of their work have been due in an exceptional degree to the self-effacement, spade-work, energy, and advice which they have had from Passmore in all their contacts with him.

On no single occasion can I ever remember Passmore losing his temper or his patience when dealing with the representatives of industry, either in committee or out of committee ; nor do I ever remember any committee on which he represented Government failing to arrive at definite decisions in agreement with the trade. His capacity to visualize a problem from the other side's viewpoint and to arrive at a solution equally satisfactory to both parties was perhaps his greatest asset and the successes he achieved in his dealings with these Industrial Committees indicates the value which can accrue by associating the trained business mind in Governmental affairs. Passmore's capacity for work and his gift for organization were an inspiration to every officer and clerk who worked under him. He got the best out of every one with whom he came into contact by sheer force of example and where he saw special merit did his utmost to ensure that it was rewarded by promotion ; but he himself was self-effacing and completely unselfish. His one aim was to see that his department never let down the war effort and the notable successes which the Textiles Directorate and the Office of the Textile Commissioner have achieved in co-operation with the Indian cotton industry, in spite of almost insuperable difficulties, were largely due to his genius.

In spite of an almost intolerable burden of work he was a delightful companion outside office hours. He lost the cares of office as soon as he left it and could throw himself with the greatest zest, if not with the happiest results, into a game of golf ; but I doubt whether he will ever achieve his ambition to be a "scratch" player. These last five and half years of unremitting toil at a desk have had their effect on his waist measurement and he must also say good-bye to the more strenuous games of hockey and rugger in which he formerly delighted, but let us hope that his resignation of the Additional Textile Commissionership does not mean good-bye to India altogether. After a richly deserved spell of leave in England his friends, and they are legion, would like to see him back in India in his pre-war capacity as a partner in the great firm of Binny & Co., Ltd.

Post-war Textile Machinery Supplies

Visit of Indian Industrial Delegation to the United Kingdom

(***From Our Special Correspondent***)

[*Our Special Correspondent has made a close study of the potentialities of England as a supplier of textile machines to India. In the following special article he states that, though for various reasons the British textile machinists may not be able to help in the re-equipment of the spinning section of the Indian mills in the immediate future, a start has already been made for increasing their output, which will enable them to meet the expanding demands of India and other places at no distant date. His suggestions for overcoming the shortage of automatic looms and his remarks on the possibilities of rayon spinning in India are worth careful consideration.*]

THE potentialities of England as a source of supply for textile machinery during the immediate post-war years have continued to engage my attention during the last few weeks when I have had opportunities of visiting some of the more important plants and discussing the supply position with Directors and Managements. All the firms I have visited have very full order books covering normal production for at least two years ; but some of the more progressive, including the companies controlled by Textile Machinery Makers Ltd., have plans in hand which, provided they can be put into effect, will increase output to figures very considerably in excess of anything touched previous to 1939.

It is as yet too early to discuss production programmes and new developments in detail, the complete success of which depends on a number of factors of which perhaps the most important will be adequate supplies of skilled craftsmen and technicians and the rate of release of pre-war trained craftsmen from the forces and from work on munitions. Most of the textile machinery firms are at present employing very large numbers of workers on munitions production, but many of these are women engaged on repetition work of a fairly simple character. The services of few, if any, of these women employees, in the Lancashire area at least, are likely to be available for the production of textile machinery after the war as their services will be required in the cotton mills from which they were chiefly recruited to take the place of male workers transferred to other areas or enlisted in the services. The arrangements which exist between employers and engineering unions might, in any event, preclude the employment of female labour in substantial numbers. The speed at which the development, extension and rationalization plans which textile engineering firms have already formulated must, therefore, depend on the rate at which release of labour from the armed forces can be made.

This may not sound promising to Indian industrialists who must be most anxious to re-equip their mills ; but the Government here is fully alive to the situation and may shortly be in a position to give textile machinery makers some of the help needed to cope effectively and expeditiously with the orders they have on hand and the further assistance which machinery makers need to ensure England's continued pre-eminence as a source of supply for textile machinery to overseas markets in competition with machinery makers in other countries.

So far the switchover from munitions to textile machinery has been below expectations. This has not been due to any lack of desire on the part of machinery-making firms but to the continued heavy demand for war materials. A start has now been made, and in spinning preparatory machinery I have reached the conclusion that the output will eventually be quantitatively and qualitatively adequate to ensure a satisfactory replacement and re-equipment rate for the great and expanding demands of countries overseas including India.

Weaving Machinery

In weaving preparatory machinery of the most modern types and in the case of automatic looms the prospects of England achieving a total output sufficient to supply a reasonable proportion of the needs of the world's markets in the immediate post-war years do not seem to me to be particularly promising, though in the case of certain individual machines the position may be satisfactory. The main reason for this is that Britain herself has not in the past been a very extensive user of modern automatic machines in this section of the trade and machinery manufacturers generally have had little encouragement or success in their efforts to popularize innovations which are becoming standard practice in America. For example, I estimate that the output of automatic looms in England in the immediate future is unlikely to exceed 400 per month ; and I have not heard of any co-ordinated plan by loom makers to develop new sources of production. Unless adequate steps are taken early by the Government and the loom making industry to remedy this unsatisfactory position England's chances of a reasonable share of the post-war world market for automatic looms and the modern winding, warping, and weaving preparatory machinery, on which the success and efficiency of automatic weaving so largely depends, are almost negligible. Personally I see no reason why automatic loom production in England should not be very greatly increased, by making use of some of the better equipped plants now building Lancashire looms ; nor do I see why supplies for India should not be augmented by integrating production in England with an assembly plant in India where some of the skilled engineering workers now engaged on munitions production could be employed. This problem of automatic weaving and weaving preparation machinery supplies will be discussed with machinery makers in England by the Indian Industrial Delegation. Wise and constructive planning could do much to overcome the weaving machinery supply problem. Without such planning the modernization of the weaving side of the Indian industry may be hampered or at least postponed.

Rayon Spinning Plants

I have referred to the probable post-war supply position in regard to cotton spinning and weaving machinery but this note would not be complete without some reference to rayon. In this particular section of the textile industry there are numerous signs of healthy activity and rapid development in technique covering an ever-growing field. Some of the very large combines such as Courtalds manufacture their own machinery but others rely, like the cotton industry, on independent specialists in machinery manufacture. One of the most enterprising of these I discovered to be Dobson and Barlows Ltd., Bolton, a well-known subsidiary of Textile Machinery Makers Ltd., who have manufactured all classes of cotton spinning machines for 150 years. This firm is at present employing about 4,000 workers chiefly on munitions but the change-over to textile machinery has already commenced. After the war this extremely well-equipped unit will apparently concentrate on the production of speed frames for the cotton trade, and the most modern machinery for rayon spinning by the viscose process. Dobson and Barlows manufactured their first rayon spinning plants as far back as the year 1900. Production has never actually ceased since that time though the slump preceding the war and war-time activity on munitions have greatly curtailed output in recent years. Experimental work has fortunately not been interrupted by the firm's war activities and in readiness for the post-war demand from all parts of the world, including India, I saw under construction and development a number of machines connected with rayon spinning and the manufacture of transparent paper from wood-pulp which appear to be in advance of current practice.

I am not in touch with the results of the research work which has been going on regarding the economic possibilities of rayon spinning in India by the viscose process but the serious difficulties which rayon weaving firms have experienced owing to inadequate supplies of continuous filament yarns during the war must have demonstrated the unsoundness of relying entirely on outside sources for raw material. Climatic conditions do not effectively rule out the idea of rayon spinning; it will perhaps be of interest to rayon weavers in India to know that the supply of the most modern machinery will present no insuperable difficulties in the immediate post-war period.

Prospects of Raising Machinery Output Discussed

Since writing the above, I saw several of the members of the Indian Industrial Delegation in London. The contacts made by these industrialists with machinery makers here have done much to clear the air. But the facts of the situation cannot be gainsaid, and with the best will and the most strenuous efforts it will be some considerable time before textile machinery is being turned out in quantities sufficiently large to satisfy actual and potential demands within a reasonable space of time. As far as spinning machinery is concerned, it would seem that another 9 or 10 months must elapse before makers are turning out as much per month as they did in the immediate pre-war years, but in two years from now the monthly output will probably be twice what it was in 1939. Plans for expansion are well in hand but the labour situation is extremely difficult and will remain so for a long time to come. The merger of machinery makers (T.M.M.) have been granted the lease of one of the largest and best equipped " Shadow Factories " in England, but it will be some months—possibly 12—15 before it can be got into effective operation. The story is more or less the same in bleaching, dyeing and finishing machinery—expansion in output is planned but some of the better known firms will need 12 to 18 months to dispose of the orders already in hand. Some firms, particularly those like James Farmer Norton & Co., who did not take heavy orders during the war period, are better placed as regards delivery. They are in a position to give delivery against *new* orders in 9-10 months, and intend manufacturing some very interesting new machines for continuous dyeing and continuous peroxide bleaching which are particularly suitable for mass production of standardized materials. For winding machinery, doubling and weaving preparatory machinery of the types already well known in India, the delivery position may be a little better than it is in the case of spinning machinery, but when machines of the latest automatic types are required delivery under 18 months, against new orders, would be unlikely. The new jigs and tools required are being installed and the phototype stage has generally been reached, but delivery in quantity against new orders will not be feasible for a long time. Many very interesting new machines are under way in this particular section of the trade—such as the Abbot and Hacoba Automatic Winders, but now is perhaps hardly the time to dilate on them.

There are other very interesting developments in spinning and finishing machinery, e.g., the Mather and Platt Stentering Machine, and the incorporation of ball-bearing spindles as a standard fitment in most British-made ring frames. A number of refinements and improvements have also been introduced on the Northrop Looms, but, speaking generally, spinning and weaving machinery design will follow normal practice with emphasis on mechanization and automatization wherever possible and economical, and larger packages than are now common in India at most machines.

The output planned and expected in the case of automatic looms of the bobbin changing type, seems to me to be far too small for the expected demand. Whether anything can be done by the manufacturers themselves or by Government to step up the output of automatic looms remains to be seen, but I at least am convinced, that a very much greater output than that now planned to be achieved could be absorbed. What I am afraid of is that, if automatic looms are unobtainable in adequate quantities, India will continue to buy non-automatic looms. That would have been all right in the days of long working hours, and low paid work, but not to-day. India has an opportunity of being amongst the most efficient and up-to-date producers of cotton goods in the world, and she should not let slip her opportunity.

Priorities

One rumour which was effectively squashed as a result of the talks which the industrialists had with machinery makers was that concerning delivery priorities. As far as I have been able to gather, no country, not even England, is to get any priority in delivery over India. Orders will be dealt with in rotation and India has been well forward in placing her orders. It is, of course, realized that much more machinery will be ordered in the immediate future, but judging by the past India will not be laggardly in this regard compared with other countries. There is one point I should like to make while on this subject of priorities. There should be no delay in the submission of detailed specifications when machinery is ordered. A manufacturer of machinery cannot go ahead unless he knows exactly what he is required to make, e.g., in a ring frame—lift, gauge, type of drive, type of motor, etc., and rotation priority may be lost if full details have not been given when the order was placed.

Prices

Present prices for spinning machinery appear to be between 100 and 120 per cent. above the immediate pre-war price, and so far there has been no tendency to any decrease. Wages and material are the main factors affecting price but it is unlikely that the former will decrease in the near future, but there may eventually be some decrease in the cost of certain materials. It is fairly certain that coal costs will remain high, and coal is one of the most important raw materials for the Lancashire machinery industry. Prices in these circumstances are likely to remain high, but if the plans for expanded production fructify, overheads will be spread over a greater output ; and provided wages go no higher than they are to-day, the eventual trend of prices will be lower.

In other types of textile machinery, the increases compared with pre-war vary between 55 and 85 per cent. with the future trend uncertain, with prospects of further increases in the immediate future for certain machines. The ultimate trend will depend largely on the extent to which savings in overheads can be effected by spreading them over a greater output.

Machinery Manufacture in India

It is too early to say whether the visit of the industrialists will give anything like a fillip to the scheme for manufacture and assembling in India, but the subject has been broached at informal meetings and provided reasonable terms, compensation and safeguards were offered by India, I gathered that the British machinery makers might be disposed to assist the growth of a textile machinery manufacturing plant in India. It can at least be said that British interests are not unsympathetic to the idea and that it would be a pity if politics prevented a mutually satisfactory business arrangement being reached. Conversations are expected to be continued when the industrialists return from the U.S.A.

Extent of Demand for Machinery from India

A number of queries have been put to British makers of machinery by Indian industrialists as to Britain's capacity to meet the expected demand for textile machinery from India in post-war years.

Sir Ardeshir Dalal indicated a demand of 1½ million spindles per year for the next five years, basing his estimate on a complete replacement of existing spindles in 10 years, which would mean one million per year, and a 50 per cent. expansion during the same period, which would mean another half million spindles per year.

Judging by the demands already formulated and submitted in the form of orders, the figures mentioned by Sir Ardeshir may not be reached, but even if they are, it should not be impossible for Britain to meet them, as far as spinning machinery is concerned, for the eventual output target for the British textile machinists is 5 million spindles per year, which means that the Indian demand would only absorb 30 per cent. of Britain's spinning machinery production.

If in actual fact India's demand for British textile machinery is less than 1½ million spindles per annum, it could easily be met in full and while time for delivery would be eighteen months or so in the earlier post-war years, the position would rapidly improve as time went on, and maximum output had been achieved.

Recent Changes in Futures Trading in Cotton

BY KISHORLAL R. MARFATIA, B.A.

(Specially Contributed)

In the August 1942 *issue of the* Indian Textile Journal *was published an article on the Indian Cotton Contract by Mr. R. G. Saraiya. The following article by Mr. Kishorlal R. Marfatia deals with the structural changes made in the Indian Cotton Contract in the current year and the way in which this contract has been aligned to the Government purchase plan for Indian cotton. In view of the fact that the constitution of the contract for the next year as well as the Government buying policy will be under discussion shortly, we consider this article will be read with interest. Mr. Marfatia is the Managing Director of Messrs. Narandas Rajaram & Co., Ltd., and a member of the Appeal Committee and the Standards Committee of the East India Cotton Association, Ltd.*

THE Indian Cotton Contract was inaugurated in July 1942 to meet the exigencies of the war and the changing cotton economy of the country. Trading in this contract came to a sudden stop in the very first year of its working under the orders of the Government of India on 19th May 1943. During the first boom of the inflation period, the Government of India apparently thought that raw cotton was leading to higher prices for cloth, whereas a study of the yarn and cloth prices shows that cotton merely limpingly and haltingly followed the advance in cloth and yarn.

At the time of closing down of the Futures contract, the Government did no more than recommend to the mills not to pay over what they considered to be fair prices for various types of cotton, but no steps were taken to fix any statutory ceilings for cotton. As the new crop movement drew near, Government, on the advice of the Textile Commissioner acting in consultation with a sub-committee of the Textile Control Board decided to allow resumption of Futures trading in October 1943 within a range of Rs. 550 as ceiling to Rs. 400 as floor for Jarilla 3/4" the basic cotton of the I.C.C. Differences were laid down for other varieties of cotton, but the floors for them were to be operative only when the Futures contract touched Rs. 400. At that level the floors were to be effective with the differences for other varieties then ruling at the time, but not higher than those laid down.

This was the second year of the working of the contract and again Government intervention became necessary, but this time with a view to maintaining the floor prices. Thus, even in the second year of the contract, Government intervention became a feature of trading. On 19th June 1944, the floor level was touched and Government came in to purchase cotton and before the expiry of the season Government bought very nearly 282,000 bales.

Experience of the happenings of the 1943-44 season led to certain changes both in the manner in which the floors were to be operative and in the constitution of the contract itself. For one thing, the floor price of the basic cotton was reduced by Rs. 50 so that the trading range permitted in the contract was from Rs. 550 to Rs. 350. Secondly, varieties other than Jarilla which constituted nearly five-sixths of the cotton of the Indian cotton crop were given effective floors, i.e., that the floors were to be operative even if the contract did not touch the minimum level of Rs. 350. Thirdly, the Government for their purchase plan laid down certain minimum staple requirements for descriptions of cotton other than Jarilla such as Surats, 289F, etc. Then again, Government, in order to give effective support to the contract, accepted the same staple standards as those of the East India Cotton Association Ltd.

All these and the experience of trading gained so far necessitated changes in the constitution of the contract.

Specifying Minimum Staple Requirements

The first important change was to specify minimum staple requirements of descriptions other than Jarilla. For example staple varieties such as Sind NT and 289F, Punjab 289F, Surats, Cambodia and Coompta were ordinarily seven-eighths or more and in the previous Broach contract these varieties were tenderable only if they were of 7/8″ staple. In the Indian Cotton Contract these were tenderable from 3/4″ to 7/8″. The experience of the trading was that to make these varieties tenderable upto 3/4″ was an anachronism and might stimulate and give official recognition to the dangerous practice of mixing them with shorter staple cotton. The staple requirements of these varieties were therefore laid down as 7/8″ minimum but with a tolerance of 1/32″.

For the same reasons, the minimum staple lengths of Sind and Punjab LSS, Uplands, Westerns and Karunganni were laid down as 13/16″. Here again, a staple tolerance of 1/32″ was given, but in this case, premium would be available upto 7/8″.

In the case of Broach and Sind and Punjab 4F, the minimum staple requirement was kept at 3/4″, but the premium available here was allowed upto 7/8″. This was not academic as 4F is sometimes 25/32″ and even upto 13/16″, although the quantity of that would be small. In the case of Broach, with the advent of the new Vijay (B6) seed the staple is usually 25/32″ and even 13/16″, but in certain seasons certain of the special seed varieties such as 1027 seed imported from Surat go upto 7/8″. It may be mentioned in passing that the Vijay seed has gained great popularity in Broach and about 80 per cent. of the crop is Vijay, the balance being BD8 and 1027, and the old *Ghoghari* seed known as *deshi* has been entirely ousted.

In the case of Jarillas, this is the basic cotton and some of the Jarillas, especially in the C. P. districts come upto 27/32″ or 7/8″. Here the basic minimum was retained at 3/4″ with premimum available upto 7/8″. It should be noted that where the minimum staple is 3/4″, no staple tolerance is available.

Reducing the Discount

The second change has been to reduce the discount prevailing on the tendering premium of descriptions other than the basic Jarilla cotton from 18-3/4 per cent. to 12-1/2 per cent. The experience of 1943-44 showed that 18-3/4 per cent. discount instead of being merely a discouragement was prohibitive and prevented these varieties from getting the protection of the contract except in theory. The original idea behind this discount was that as a very big proportion of the crop had been made tenderable, some safeguard was necessary to the contract by way of a check against the heavy pressure of tenders. Otherwise, the Hedge Contract would turn into a contract for effecting deliveries and become a mere plaything of bears. *Per contra*, it was not intended that these descriptions should remain tenderable on paper only, but to exercise their weight as a corrective influence when occasion rose. From the very short experience gained so far this season this change has justified itself. Whether this change should be retained or not or the discount be further reduced would require experience over a further period.

Preparation of Staple Standards

The next change is connected with the preparation of staple standards. The debacle in the cotton market since April 1944 and the Government prescribing their own standards for its purchase programmes for support at the floors brought to the fore controversy regarding staple judgments. For the first time in the history of trading, the contract had prescribed staple requirements permitting a range from 3/4″ to 7/8″ to be tendered at varying premia. The E.I.C.A. staple standards came in for criticism and despite a lot of controversy about the preparation of the Indian standards and the highly exaggerated and inaccurate notions about the uniform length of the individual fibres of the U.S Department of Agriculture Standards, it was generally felt that the E.I.C.A staple standards of the 1943-44 season were on the high side. It may here be added that no member of the trade appealed against the staple standards although it was within the competence of the members to do so within a fortnight of the E.I.C.A. Ltd. notifying the trade that the standards were ready and open for inspection. The procedure now laid down is that the Standards Committee is to select three to six samples of each staple denomination. These are to be sent to the Technological Laboratory for testing purposes. The results of the Laboratory tests are to be used for guidance only in the final preparation of the staple standards. The Textile Commissioner accepted this arrangement for the preparation of standards and the standards thus prepared as acceptable to the Government in its purchasing programme. The Textile Commissioner has the same right as the members of the trade to appeal to the E.I.C.A. Ltd. for revision in case he does not agree with the standards as prepared.

Changes Due to War-time Controls

The rest of the changes are a result of the war-time controls and with a view to align the contract to the Government purchase plan.

The first change of importance in this connection is giving the buyer of the contract the right of refusing delivery of cotton. This in practice would be exercised only at the floor level and possibly at slightly above the floor level because the invoicing back or the settlement of the contract would be at the floor price, i.e., Rs. 350, with a penalty from the buyer to the seller at Rs. 7-8 per candy. As the Government floors and ceilings are operative only for the 1944-45 contract, the above change is effective only for the trading months of the 1944-45 season. The seller who thus gets the cotton back can re-tender the same to the Government who have declared themselves to be under an obligation to receive the cotton under their purchase plan whenever offered at the floor levels. As the terms of the Government buying plan are now the same as those of delivery against the contract, the seller would find no hardship in the disposal of his cotton.

Another change has been to drop out certain varieties from the tenderable list as these are excluded from the Government purchase plan, viz., M.G. Dholleras, M.G. Kalagin, M.G. Bijapur, M.G. Miraj and M.G. Bagalkote. It is understood that the object of excluding these varieties was to encourage the growth of food in these areas.

It is necessary to explain why so much trouble has been taken to align the contract to the Government purchase plan. Experience of the 1943-44 season showed that the object of stabilizing the market by Government buying spot cotton could not be fully achieved if Government did not support the contract in some effective manner. It was essential to find some means whereby docket cotton could be diverted to the Government in their purchase plan. One solution was to leave the buyers on the contract to turn over to the Government cotton received against the contract as valued in E.I.C.A. surveys. The Government did not agree to this and insisted on accepting cotton with the valuations of their independent *Ad Hoc* Committee of experts as falling within the scope of their purchase plan. The difficult problem of linking docket cotton to the Government purchase plan was solved firstly by giving the last buyers in the contract the option to refuse delivery with a small penalty and, secondly, by making the terms of delivery against the contract to synchronize with the Government purchase plan so that the seller who had his cotton refused could re-tender same to the Government without difficulty. Two objects are thus achieved. The buyers in the contract do not get any cotton that falls outside the scope of the Government purchase plan and, secondly, at the floor level the weight of cotton is transferred from the contract to the Government.

Still another change is of a consequential nature. As there are now fixed floors and ceilings for each tenderable growth, it has been laid down that the buyer in the contract is not to pay less than the floor price or more than the ceiling price fixed for that variety for cotton delivered. This is with a view to make the contract conform to the promulgated floors and ceilings. At the level of, say, Rs. 370 for I.C.C. the tendering premium of Sind NT may be, say, Rs. 80 so that with the 12½ per cent. discount the price realizable would be Rs. 440 which is under the floor rate. A similar situation may arise at the ceiling levels where the price may work out to be higher than the ceiling fixed for a particular variety.

Working of the Contract

The working of the contract this season has not shown any great difficulties. Most of the changes, as has been said, have been necessitated as a result of the experience gained in the previous seasons. The reduction of tendering discounts on descriptions other than Jarilla has not had any appreciable depressing effect on the contract. On the other hand, the revision of the staple standards which bring the Indian staple standards more into conformity with the Universal staple standards has enabled more of the

Jarilla cotton to be approved against the contract. It was felt that not only were the E.I.C.A. staple standards of 1943-44 high, but also that the trade conception of staples had to be revised. The contract has moved within the range of Rs. 390 to Rs. 460—a very short range for cotton, perhaps a range which the Government would approve as their idea in permitting resumption of Futures trading in cotton was to enable smooth marketing of the crop without any violent changes in the price level. It may be mentioned here that the Central Government had looked askance on the resumption of Futures trading. In the early months of the trading this year after the declaration of the American cotton subsidy, the contract registered a sharp drop to Rs. 390 and it is generally believed that but for the functioning of the Futures, cotton might have touched the floor level which would have necessitated Government buying. As this happened at the beginning of the marketing season, it would have meant a fair part of the crop being marketed sold at the floor level of Rs. 350. In the opinion, therefore, of many people, Futures trading enabled the farmers to realize prices higher than the floors and saved the Government from the necessity of buying fairly large quantities of cotton.

Principal Features of the Indian Cotton Contract as Amended

Below is a tabulated summary giving the principal features of the Indian Cotton Contract as amended :—

1. Basis		Fine M.G. Jarilla (including Verum, Cambodia, Upland and Gaorani) cotton grown in Khandesh, C.P. and Berar, Nizam Hyderabad, Central India, Gwalior State and certain Rajputana States.
2. Grades		Tenderable upto two classes ON, that is, upto Extra Superfine, and one class OFF, that is, upto Fully Good.
3. Staple—		
(*a*) for Basic cotton		¾″ minimum and upto ⅞″ at current premia; cotton below ¾″ staple to be rejected, but buyers' option to accept upto 1/16″ less, i.e., upto 11/16″ at full discount.
(*b*) " other varieties "—		
Broach	¾″	(1) Minimum as specified and upto ⅞″.
Sind 4F		
Punjab 4F		
Sind LSS	13/16″	(2) Where minimum is 13/16″ or ⅞″ a tolerance of 1/32″ applies.
Punjab LSS		
Uplands		
Westerns		(3) These premia obtainable are subject to a discount of 12½ per cent. as in 7 (*b*).
Karunganni		
Sind NT	⅞″	
Punjab 289F		
Sind 289F		(4) Buyers' option to accept upto 1/16″ less than the staples specified.
Surats		
Coomptas		
Cambodia		
4. (*a*) Delivery months		January, March, May, July, September.
(*b*) Period		1st to 25th of the month.
(*c*) Crop tenderable		Crop of the current season, but in case of January delivery " Southerns " of the previous crop is tenderable.
5. Restrictions in trading during delivery period.		No fresh trading in the contract for delivery during that month permitted after the 7th day of the delivery period except for the purpose of squaring long and short positions in the contract.
6. Descriptions tenderable as " Other varieties "		M.G. Broach, M.G. Surti (including Navsari, Ankleswar and Rajpipla including Jagadia, Roller-ginned and Saw-ginned Punjab-American 4F, LSS, 289F (including Bahawalpur State), Roller-ginned and Saw-ginned Sind-American 4F, LSS, 289F, N.T. (including Khairpur State), M.G. Upland, M.G. Coompta, M.G. Western, M.G. Cambodia, M.G. Karunganni.

7. **Premium obtainable—**	
(*a*) For basic cotton	Full premia for both grade and staple.
(*b*) " Other varieties "	Tenderable at:— (1) At a discount of 12½ per cent. of the premium for variety and staple over the specified minimum (as in 3 (*b*)) upto ⅞″ AND in the case of OFF allowances being granted with an increased allowance of 12½ per cent. (2) At the full ON or OFF allowance granted for grade. (3) In no case shall the buyer pay less than the floor price or more than the ceiling price of the description tendered as for the time being fixed by Government under its purchase plan subject to the ON or OFF allowance for the grades.
8. Fixing of ON allowances for staple and tendering differences for " Other varieties "	Tendering difference between standards and premia for staples upto ⅞″ and discounts for staple upto 1/16″ under the minimum specified in 3 (*b*) to be fixed for the whole delivery period about the 25th day of the preceding month by a Special Committee (see 10 below).
9. Spot rates	(*a*) Ordinarily a Daily Rates Committee divided into four panels of six each chosen from full members to fix and register market rates of different growths and spot rates of basic cotton subject to an appeal to the Board. (*b*) Spot rates for the last day of the delivery period to be fixed by the Board as also for such other days as the Board may think fit. (*c*) See 10 below.
10. Special provisions in fixing of spot rates as in 8 and 9 above.	For the purposes of (8) and in (9) for fixing rates for basic cotton during the delivery period to take into consideration (1) the prices at which cotton is sold in spot, (2) rates ruling in up-country, (3) rates for similar growths, (4) rates for succeeding deliveries.
11. Rejection of tenders	Awards to state Full OFF allowance and to state separately allowances for class and staple and the length of staple. (1) In case of cotton which is liable to rejection for Grade or Staple (i.e. more than a Class OFF ; or less than ¾″ staple; or where the specified minimum is 13/16″ or ⅞″ is less by more than 1/32″ tolerance), but is not under 1/16″ in staple than the specified minimum, buyers' option (*a*) to reject cotton and invoice back with a penalty of Rs. 3 per candy, *or* (*b*) to weigh over the cotton with full allowance awarded. (2) In case of cotton which is more than a " class and a half OFF " or less by more than 1/16″ staple, if the buyer rejects and invoices back cotton the seller becomes liable to a penalty, which penalty or aggregate penalty shall not exceed Rs. 25 per candy if so awarded by the Appeal Committee. *N.B.*—Total penalty to seller cannot exceed Rs. 25 per candy in any case.
12. Default in tendering	Buyers' option to: (1) invoice back at the spot rate with a penalty from sellers of Rs. 7-8 per candy; (2) demand delivery up-country, in which case the seller has the option to tender R/R or B/L bearing a date prior to the due date covering cotton consigned to Bombay ; (3) invoice back at the spot rate plus a penalty from sellers of Rs. 25 per candy in case of sellers' failure to give up-country delivery.

13. Special provisions against manipulations	In case the General Body by a simple majority decides: (A) a "squeeze" or "corner" has occurred and until it decides it has ended, (1) discount of 12½ per cent. on "other varieties" as per (7) to be discontinued; (2) penalty provisions of "Default in delivery" not to operate; (3) Board to take over fixing of spot rates of all cottons especially bearing in mind the four special provisions already mentioned under (10); (B) a "bear" raid has occurred and until it decides it has ended, (1) the discount of 12½ per cent. on "other varieties" as per (7) to be increased to 25 per cent.; (2) buyer given the additional alternative right to buy on account of the seller in case of "rejections of tenders" and in case of "Default in delivery." (3) Same as in A (3) above.
14. Emergency powers of the Board	If the Board feel that a state of emergency exists as a result of this war, and if the Government of Bombay concur, the Board may fix prices at which all forward contracts (both Hedge and Delivery) may be closed out.
15. Quorum for the Board in emergency	In an emergency as referred to in (13) and (14) above and for the fixing of weekly Settlement rates during the war period, the requirements of the quorum for the Board to be altogether dispensed with and such rates as may be fixed in such a Board meeting shall be effective, subject to the sanction of the Local Government.
16. Buyers' option of not taking delivery	In the case of 1944-45 season contracts for which the Government have fixed "floors" under its purchase plan the last buyer has the option of refusing delivery. In such a case, the cotton is to be invoiced back at the floor price of the basic cotton, i.e., Rs. 350 with a penalty from the buyer to the seller of Rs. 7-8 per candy.
17. Deposit	An amount of Rs. 12-8 per bale free of interest on the net open position in the Futures to be paid to the Clearing House on each weekly settlement day.
18 Super Appeal	Super appeal is permissible in quality dispute against awards for "staple" in case of tenders against Hedge contracts. Half of the fee of Rs. 250 per tender is refundable in case of a successful appeal. The Committee is to compose of three members.

New Textile Discovery: Silklike Fibre from Seaweeds

PROFESSOR John Speakman of Leeds University, describing his accidental discovery that seaweeds yield a silklike fibre, said: "Non-twist cotton and woollen materials can be woven together with 'seaweed silk' and then washed in soapy water, leaving only the basic textile in all manner of open-work designs."

"Mohair, with seaweed fibres twisted around, can be woven as easily as wool. When the disappearing fibres are dissolved, a cloth similar to Astrakhan remains. The new fibres will be especially valuable to milliners and to women who embroider their own materials. A piece of 'seaweed silk' can be decorated with a silk or woollen pattern and then placed in soapy water to leave the embroidery. This can then be shown separately on a hat, cushion or other object."

The seaweed fibre, which dyes well, has been produced in a soap-resistant form.

The Industrial Worker in India—2

Maternity Care and General Medical Service

BY LALITA KUMARAPPA, B.SC. (*Cornell University, U.S.A.*)

(*Specially Contributed*)

IN my introductory article of the series in the issue of April 1945, I mentioned several of the reasons why the industry is conferring benefits on its workers to-day—actually, privileges which they never had before. The motive for doing so is not altogether unselfish, for the proprietors of big factories, mills, and other manufacturing concerns profit tremendously by getting greater output from a band of workers who are physically fit and strong, as well as contented and loyal to their employers because of the many benefits which they receive, and which makes life more worthwhile and bearable for them.

As I also mentioned previously, Western industrialists are doing much to improve the lot of the men and women workers employed by them. But in our country, nothing noteworthy was done in this direction till quite recently. Of course, charity has been practised in India since time immemorial, but social service in India to-day is not limited to merely that. Taking a lesson from the highly specialized methods used in America, England, and Russia, our trained social workers (whether employed by mills, public institutions or private bodies) adapt them to fit Indian needs and conditions which are vastly different—due mainly to religious customs, traditions and superstitions that are centuries old and deeply ingrained in the culture of our people, and which, therefore, mould their thought and behaviour to an absolutely incredible extent—even in this, the twentieth century ! Hence, it is essential that any *planned scheme* of benefit work must take these factors into consideration, for a programme chalked out to suit an Occidental group of workers would not fit the needs of our people at all.

When a few of our more progressive industrialists decided to improve the lot of their employees, they found that problems of sanitation, health, medical attention, housing, and those of marital maladjustments and birth control were the most pressing. Added to these were the need for physical culture and recreation, education, art and handcrafts.

In this article, I shall deal with Maternity Care and General Medical

This shows the Medical Staff and Nurses of the Tata Iron and Steel Co., Ltd., Jamshedpur. Medical facilities in India are so inadequate that our poor people suffer from want of attention. Thus it is encouraging to note that some progress is being made in this direction to fill the much-wanted need.

Service, as it is of vital importance to the well-being of hundreds of thousands of workers employed in every mill, factory, and in various other kinds of industrial plants.

We find that the problems created by modern mechanization of industry in India are very different from those prevalent in the West (though there are certain features which are common to both, as one might naturally expect). Our population and civilization are more or less rural, and not urban, like that of the West. We have only 11 per cent. of city people as compared to France with 49 per cent., Canada with 53.7 per cent., U.S.A. with 56.2 per cent. and England and Wales with 80 per cent. But this small percentage of ours—which nevertheless runs into millions—has a very low standard of living because of the meagre pittance it receives in the name of "*wages*"; the excessive crowding of the living quarters of the millhands, resulting in the creation of slum areas, as well as child and woman labour, undernourishment, and poor working conditions. Surveys show that another evil—indebtedness—prevails among not only the rural population of India, but also among the industrial group as well. The Royal Commission reports that the majority of such workers are in debt for the greater part of their working lives. The burden of debt is aggravated beyond all proportion by the rate of interest which is demanded by the usurers who charge from 75 to 325 per cent. annually. These exorbitant rates just bleed the people who can, at best, ill-afford to pay even a fraction of the amount asked for, let alone these heavy charges. Thus, they are kept in bondage and poverty for many years. As a result, they have not the wherewithal to buy the nourishing food they need, and we have malnutrition and low vitality to combat in addition to the other evils. It is a well-known fact that if the people of a certain country are poorly fed generation after generation they become weak, sickly, and thus easily fall a prey to any disease which ravages the land. Because of this poor nutritional foundation which our people have the *expectation of life*, at most ages, is low compared to that of other countries, especially those of the Occident.

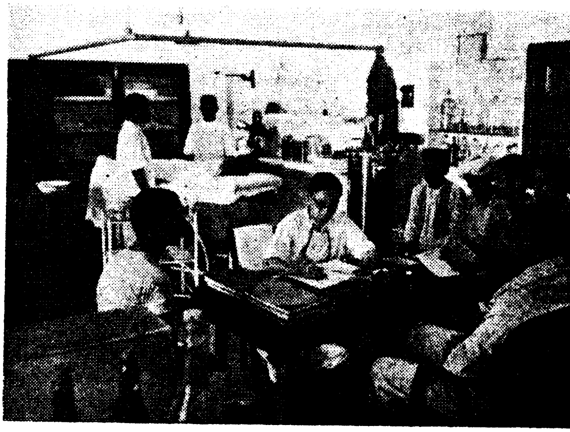
Mothers gather with their babies at the Child Welfare Centre run by the Cawnpore Mills.

Female Mortality

The fundamental unit upon which any civilization rests is *the family*, with the mother as its presiding goddess. Every child should have a mother's selfless love and tender care in infancy and childhood, and her wise guidance as he or she approaches adolescence and thence into manhood or womanhood. Educationists, social reformers, and psychologists realize that family life is the paramount social influence in the life of the child, and hence they stress the need for home life with both parents—but especially the mother—to

A Mill Store for provisions where foodgrains and other foodstuffs are sold to the workers at cheaper than market rates.

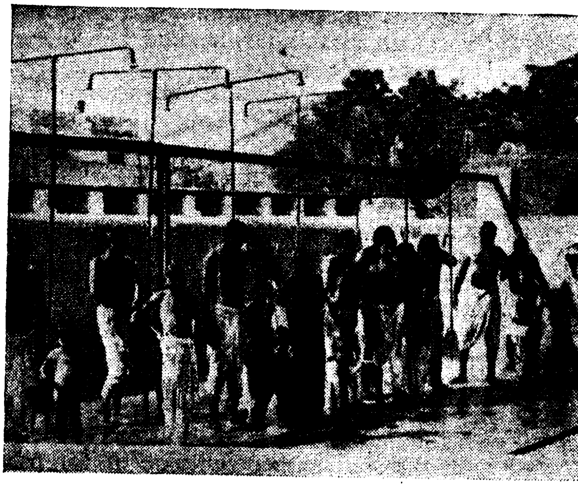
mould the child along the right paths of development. But this ideal is only too often lacking, for statistics show that maternal mortality renders motherless about 250,000 homes annually. It has been found that 15 to 40 years is the age-period of highest female mortality—being the years during which they bear children. Many adolescent girls die because of leading early married life when they are not yet physically prepared for it, or die premature deaths in child-bed. If, on the other hand, she survives, she is exhausted by too frequent child-bearing, and the responsibilities of looking after a large household on inadequate funds, thus also leading to an early grave. It is, therefore, a vicious circle, no matter how one looks at it, because the poor young mother suffers, very often sacrificing her life for the child she bears, and the infant in its turn is weak, sickly, and lacking a mother's loving care. That such babies often die is only to be expected, as long as things continue as they are. What, then, is being done to ameliorate this awful state of affairs?



The Doctor at work in the neatly equipped Mill Dispensary maintained by the Elgin Mills of Cawnpore.

It is not within the scope of this particular series of articles to discuss what the Government, the various municipalities or private organizations are doing to better this situation, but merely to tell you something of the uplift work being done in certain industrial concerns, and to hold them up as examples to those lagging behind.

General Medical Care



The workers are so eager for a shower at the end of a day's hard work that they just make a bee-line for the baths.

General medical care is offered to *all* the employees of these progressive concerns. It is mostly free, but sometimes there is a slight nominal charge. When a person is engaged for work he or she is submitted to a complete comprehensive examination of eyes, ears, nose, throat, chest and lungs, heart, and so on. A record is kept which is compared to the next checkup results when he comes in for another examination at stated intervals of three or six months. If anything is wrong, the doctor tries to cure it and make the patient well and strong. All workers are encouraged to take daily exercise, and to play games, for it keeps them fit, and healthy, and they are not cooped up in their houses all during their off-time. Spending a few hours each day in the fresh air and sunlight and having plain but nourishing meals are the two simplest ways to combat that dread disease—tuberculosis.

In order to achieve the ideal of having more and better food at cheaper prices, one mill has its own food store for its employees. Here the workers get rice, *dhal*, wheat, *masalas*, ghee, vegetables and other things at cheaper than the market rate. By shopping here the workers save money which can be spent on other essential foods such as milk, and fruit which is in season, or on clothes, *or* it might actually be saved to form a small nest-egg for a rainy day ! In this manner, even the provision store is one more step taken in building up the health of the industrial worker.

The saying that "cleanliness is next to godliness" is trite but true. Hence, the employees get lectures periodically on the care of their person, and homes. They are told the value of bathing daily, and beautifully clean bathrooms with showers and toilets with proper sanitary arrangements encourage them in being clean, and make it a pleasure instead of pain. They are also taught the principles of civic cleanliness as they are a community, and must, therefore, live harmoniously together. Lessons in first aid and simple home remedies for minor ailments are also taught, and most of those attending these lectures and demonstrations find them instructive and interesting, especially when there are film shows, lantern slides, models and coloured charts to press home the point.

Better Wages

If disease and death are to be prevented, a higher standard of health, a better physique, and a greater resistance to infection has to be developed. But these requirements can only be attained by adding to the income of the working class family, so that they can buy the right kind of foods of the right quality, and, in the proper amounts in order to maintain good health. One way of aiding them in achieving this end is to add to the income of each family, and this is being done by paying better wages ; by giving bonuses for work well done; by having special rates for exceptionally clever and skilful workmen, and also by helping the workers to earn side money by teaching them various arts and crafts, and also cottage industries to while away their leisure hours in a useful and profitable manner.

For the welfare of the women workers, we note that some industrial concerns have set up *maternity benefits* voluntarily, and for this they are to be sincerely congratulated, as it is one of the most needed modes of help. And the gratitude of those women who have taken advantage of this scheme speaks far louder than any oral praise which we may give.

Some of these mills and factories maintain both a man and lady doctor on the staff, either full-time or for part of each day, and other concerns have visiting doctors. This system is not quite as good as having them " on the spot " for giving immediate attention to any worker who might need it. I do not need to emphasize the value of having a full-time woman doctor on the staff of any large industrial organization which employs a big percentage of women workers, for the service she renders is of invaluable benefit to those women who will not go to a man doctor under *any* circumstances —not even if they are dying ! Tradition and custom are so firmly ingrained in their nature that their very souls recoil in shame and horror at the mere suggestion that they go to a man doctor for attention. It will take a long time before we can get the majority of our women to accept a man doctor impersonally, and merely as a means of getting well. Because we are so hide-bound by our culture, many of us would rather remain ill than do the sensible and rational thing.

Several of the doctors attached to these mills and factories are fortunate in having well-equipped, clean and airy dispensaries, waiting rooms and a few wards for really ill patients, as well as a good operating theatre with up-to-date surgical instruments. They are assisted by competent nurses, social workers, and health visitors in keeping records of the family history, health chart, financial status and other data regarding each worker.

Maternity Benefits

When a woman worker is pregnant, the lady doctor in charge of the plant examines her periodically, and prescribes whatever is necessary. The expectant mother is given a certain quota of milk to drink daily—either free of charge or at a nominal cost. There are weekly or fortnightly classes where all mothers-to-be are taught the principles of cleanliness ; the need for a normal but nourishing diet till the baby comes ; the need for mild exercise to be taken daily to keep the body fit for the ordeal of confinement, and how to care for the new-born baby when it arrives, and so on.

As the doctor examines each pregnant woman, she makes inquiries about the family income ; whether this is her first child, and if not, how many she already has ; what her other confinements were like, etc., the kind of man her husband is. From what the woman says the doctor is able to get a fairly comprehensive picture of her home life. Then, if the doctor thinks it necessary, she is given instruction on *birth control* methods. The only trouble is that many of the women do not take such advice, as they think it wrong and sinful to use contraceptives. Their belief is that they must have as many children as God gives them, regardless of the results of having too large a family on too small an income.

When " the time " is near, the woman worker is given 10 days to a fortnight's leave *with pay* in order to have her baby comfortably, and with financial worry off her mind. And on her return to duty she is given fairly light work for another fortnight or so till she quite recovers her strength. If she has no woman relative to look after her children while she is away for delivery, the doctor and welfare worker arrange for some decent woman to care for them till the mother gets back.

There usually is a *creche* maintained for the young children of employees. The mother leaves her offspring there *on* her way *to work* in the morning and collects the child *on her way home* in the evening. The children in this creche are well looked after and properly fed by a trained nurse and teacher who has specialized in the handling of small children. The mother too does better work because of the relief of knowing that her child is safe and in good hands while she is busy all day at the mill or factory.

* * *

The Din Products Ltd., Bombay

THE Din Products Limited, textile auxiliaries manufacturers, started business at 9A, Ash Lane, Fort, Bombay, during the war and within a very short period introduced products which have been very favourably received in the textile mills, and have stood high in the tests carried out by leading laboratories like the Department of Chemical Technology, University of Bombay. The firm of Messrs. Gannon Dunkerley & Co., Ltd., Bombay, Calcutta, Madras, Coimbatore, Ahmedabad and Bangalore are the sole selling agents in India for some of their products.

Amongst various products manufactured by the company are Binol, a powerful fungicide, and Texdiser, an efficient desizing agent. These products are scientifically prepared, most of their ingredients and raw materials being available in India. Binol is a powerful non-acidic fungicide which even in dilute form is claimed to be about 30 to 35 times stronger than zinc chloride.

Texdiser is a powerful desizing agent and it is reported to give 98 per cent. desizing efficiency in comparison with some of the foreign products whose desizing efficiency does not exceed 91 per cent. This product has also been tested and approved by the Government and we understand that the company is making arrangements to manufacture it on a large scale to meet their requirements.

Din Products Ltd. have an efficient technical staff who can arrange for a demonstration of their products and they state that some of the leading mills in this country have taken advantage of their services to improve their production.

The company does not believe in the capitalistic exploitation of labour but has been the first to introduce a unique feature in its own constitution of a profit-sharing scheme by which every employee of the company is entitled to share in the profits of the company on the same scale as shareholders in addition to getting some of the advantages of a provident fund.

The Din Products Ltd. have already established themselves in the textile auxiliary trade of this country and may be able to render useful service to the industry under the guidance of Mr. N. S. Bhathena, its energetic Managing Director.

The Kier Waste Liquor

By Dr. A. M. PATEL, B.A., LL.B., M.Sc. (Bom.), Ph.D. (Manc.)

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Dr. Amritlal Patel, a well-known textile and industrial chemist who is now the Superintendent of the Mafatlal Gagalbhai group of mills in Bombay and (Navsari) Gujarat, states that the experimental use of kier waste liquor as a colloid and as an effective levelling agent in all their mills during the last three months has proved successful and that they have thereby been able to effect a saving of thousands of rupees.

WHEN the package dyeing machines were introduced in the textile industry for the dyeing of cheeses and beams, the most difficult problem was the even diffusion of the dyestuff into the intermicellar spaces of the fibres and thus to effect a uniform dyeing of the yarn. The trouble was aggravated by the fact that in this particular case, the dye solution has to travel not through an open-structure material but through the successive layers of the yarn. Confusion becomes more confounded when light shades varying from 2 ozs. to 5 ozs. per 100 lbs. of the material are to be dyed with colours which are, by nature, uneven such as the blues, violets, and greens.

The Levellisers

In order to overcome the vagrant character of the colours mentioned above and their mixtures, levelling agents such as Dekol, Levelliser DK, Dispersol L and many more were put on the market. Some retarding agents such as Peregal O and Dispersol VR also came to the rescue and helped in the execution of level dyeing. Glue, the oldest and the cheapest levelling agent, came into prominence with the introduction of the package dyeing system. However, before the terrific onslaughts of the new-comers, it was relegated to the background. With the help of glue or the levellisers already mentioned and the retarding agents, it was made possible to achieve levelness in dyeing even in the case of most delicate shades and with the greatest of vagrant colours such as the blues and the violets. However, this definitely increased the cost of dyeing. In order to obtain satisfactory results, 4-6 lbs. of a levelliser are required for 350 gallons of the liquor which are used to dye 200-250 lbs. of the material in the new package dyeing machines. When it is learnt that the current selling price of a good levelliser is not less than Rs. 2 per lb., it will be clear that to dye a lot of 200–250 lbs. of the yarn, Rs. 8 to Rs. 12 will have to be expended. If it is assumed that ten lots are generally dyed per day in light shades, the cost of the levelling agent will amount to Rs. 80 to Rs. 120 per day. It will not be a mean saving even for a prosperous concern if the levelling agent is effectively replaced by something which is easily available and which costs nothing.

Kier Waste Liquor

During the course of investigations of the different properties of the various levelling agents, it was realized that most of them were complex organic agglomerations of undefined and unknown constitutions. It was, therefore, decided to start in search of a compound which while being an agglomeration of a number of substances of unknown organic and inorganic origin, should possess colloidal properties which are useful in controlling the dispersion of the dye micelles and their rate of diffusion into the interior of the fibres. Experiments carried out with a number of substances and their mixtures did not yield encouraging results. One morning while passing through the bleaching department, I was struck by the reddish brown liquid of pleasing colour being ejected out of the kier. It reminded me, at once, of the problem I was revolving in my mind. Nothing could be better than this kier waste liquor as a colloid in which many natural impurities of cellulose were finely suspended after being modified by the action of caustic soda which was added as a scouring agent. It was not necessary for me to analyse the waste solution. Many have attempted it with varying degrees of accuracy. It was enough for me to know that I could harness it for a very laudable purpose.

Experiments were then carried out with the liquor. It was soon found that it acted as an effective levelling agent. No difficulties were experienced even with colours which have a reputation to misbehave provided a sufficient dosage of the new medicine was administered without diffidence.

Properties of the Liquor

The properties of the liquor—both physical and chemical—differ according to the quality of the goods, the intensity of boiling, and the scouring agents used. The waste liquor of the boiling-out of the colour goods is the least effective. It is, therefore, advisable to use liquors which are available after the grey goods are boiled out with 2—3 per cent. of caustic soda and other scouring agents such as soda ash, soap and turkey red oil either in open or closed kiers for a period of not less than ten hours.

The liquor may be looked upon as a hydrosol in which organic matters such as oils, fats, waxes, albuminoids, starches and other impurities accompanying cellulose are dispersed in very fine condition by the energetic action of the scouring agents such as caustic soda, the hydroxyl ion of which is capable of being preferentially adsorbed. This hydrosol is readily coagulated by solutions of sodium chloride, sodium sulphate, chlorides of barium, calcium and magnesium, aluminium sulphate and various other salts. The coagulating power of the salts increases with the increasing valency of the cations and decreases with the increasing valency of the anions. It is stabilized by the addition of caustic soda on account of the preferential adsorption of the hydroxyl ions. The stabilization in presence of caustic soda is evident by the greater transparency of the hydrosol and by the fact that greater quantities of electrolytes are necessary to coagulate it. It is readily precipitated by the addition of either mineral or organic acids. It is not affected by hard water. This means that the precipitation of the hydroxides of calcium and magnesium present in hard water is, effectively, inhibited, the inhibition being dependent on the degree of hardness of the water.

It should be noted that the liquor is very dilute. Its strength varies from 1.5° Tw—3° Tw. There is no necessity to concentrate it. It should directly be led from the bleachery to the dyeing department and used as such.

The liquor possesses reducing properties on account of the natural and "added" impurities of cellulose being modified by the vigorous action of the scouring agents. On account of their presence, it is estimated that less hydrosulphite is necessary. The amount can safely be reduced by 10–15 per cent. As the liquor is also alkaline, the quantity of caustic soda can also be reduced, the reduction being dependent on the alkalinity of the waste lye.

It should be mentioned that some of the existing levelling agents are neither alkaline nor reducing in their character. Only the retarding agents such as Peregal O and Dispersol VR exhibit reducing properties. In the study of the kier liquor, the emphasis is not so much on its reducing or alkaline properties as it is on its predominant colloidal characteristics which are mainly responsible for the uniform dyeing of cellulose materials.

Uses of the Liquor

(1) The liquor should be allowed to settle down and the clear liquid which is transparent and of pleasing colour should be taken for use.

(2) The quantity of the liquor for use in the dyeing vessels depends upon its strength. It is recommended that 10–15 gallons of the liquor standing at 1.5° Tw.—2° Tw. are necessary for 100 gallons of the dye-bath. If difficulties are experienced, the amount can conveniently be increased. There is no harm if more is used.

(3) It can be used in all those cases where level dyeing is of prime importance.

(4) It can effectively replace the existing levelling agents such as Dekol, Levelliser DK, Dispersol L and others of lesser importance.

(5) In its presence, dyeings can be carried out in hard water provided a sufficient quantity of the liquor is added to the dye-bath. The dosage is directly proportional to the degree of hardness of the water used.

Mechanism of Level Dyeing

The main factors responsible for level dyeing are:

(*a*) The size of the dye micelles.

(*b*) The electric charge and its character.

(*c*) The presence of protective colloids.

(*d*) The presence of destabilizing agents such as electrolytes.

(*e*) The temperature of dyeing.

It is unnecessary to discuss in detail the various factors enumerated above. Those who are interested in the study of these phenomena may refer to various articles published by the author on the subject (*cf. Textile Manufacturer*, June 1934, Feb. 1935; *Textile Recorder*, Oct. 1934, *Indian Textile Journal*, Jan. 1937, June 1938; *Textile Colorist*, Aug., Sept. 1937).

Summary

(1) A new levelling agent which costs nothing and which is as effective as the existing level dyeing auxiliaries has been described.

(2) It is pointed out that the levelling influence is exerted by the colloidal characteristics of the liquor which can be looked upon as a hydrosol.

(3) As a hydrosol, it obeys the valency rule and exhibits all the characteristic properties which are generally attributed to the negatively charged colloids.

(4) Its application to the level dyeing of textile materials with vagrant colours such as the blues, violets, greens and greys and their mixtures has been described.

Cotton Research in United States

UNITED States experts in cotton technology are engaged in an extensive programme of research aimed at creating better strains of cotton. By improving processing methods and use of chemicals, etc., they hope to develop cotton fibre so that it will embody some of the advantages of the synthetics and yet retain its own good qualities.

At the Department of Agriculture's ginning laboratory at Stoneville, Miss., U.S.A., research workers are trying to develop machinery to remove the dirt which the mechanical harvester picks up along with the cotton. The transportation, storage and other costs of handling the extraneous material, amounting to about 100,000 tons annually, which travels to the mills with cotton lint, represents millions of dollars a year.

This laboratory is also seeking a method of eliminating the dirt which goes through the saw of the gin with the cotton, as well as a better way for getting the seed out of the cotton in order to cut down the injury to the lint.

Consideration is being given to finding better methods of compressing the cotton bales. This, the United States War Food Administration estimates, would reduce the cost per bale by 30 to 50 cents. However, a newly developed gin press, said to be capable of producing bales of 22 lbs. per cubic foot, is producing bale packages "much superior to the present bale" from many points of view, says the Department of Agriculture.

Government and industry scientists are debating the merits of manufacturing new midget gins or centralizing ginning in a few giant mills. Thus, while at Stoneville experiments are centring on making small gins, W.F.A. experts consider capacity under an annual volume of 10,000 bales (500 lbs. each) as an "uneconomical unit."

A trend toward the greater centralization of ginning facilities in the United States has already caused the number of ginning plants in the country to decrease by two-thirds during the past twenty years.

With regard to the polymerization of cotton, the War Production Board says: "Extensive impregnation and spinning tests of cotton impregnated with syton W-20-Q (silicon polymer resin) are indicative of great promise."

New uses of cotton which are being developed include production of cotton plastic laminates. Of this, W.P.B. says: "Many parts of the aeroplane of the future may be made of this new material." The Cotton Council also has done research on reinforcing plastics with unspun cotton fibre layers in the manufacture of tough materials, while scientists at New Orleans are experimenting with a cotton paste to obtain a greater sticking strength.—*Textile Mercury and Argus.*

Technicalities of Parachute Manufacture In India

BY K. N. TIKU, *Superintendent of Industries (Textiles), Jaipur*

Mr. K. N. Tiku, Superintendent of Industries (Textiles), Jaipur, who contributes this article, has had 12 years' practical experience in the art of weaving wool, cotton, silk, dyeing and finishing. He was serving in the Sri Pratap Mills, Srinagar, for five years, where military blankets, serges, and hospital blankets were manufactured and supplied to the Government. He was in charge of the Parsi Industrial School, Bombay, for one year and has worked in different capacities in the Industries Department of Jammu and Kashmir. As demonstrator of the peripatetic weaving parties, he introduced a number of labour-saving appliances, fancy designs and marketable fabrics amongst cottage workers and as Secretary, Village Industries Committee, organized many industries such as weaving, printing, dyeing, tanning, embroidery, handmade paper, block making, carpet and durrie making on commercial lines. He has organized exhibitions in Kashmir and was deputed specially by the Kashmir Government to the Punjab to study the marketing organization. He was sent to Leh (Ladakh) to introduce wool weaving on handlooms and make researches on local wool.

As supervisor of the Government Silk Weaving Factory, he produced georgettes, crepes, chiffons and ninnons, and was specially in charge of parachute manufacture.

As Superintendent of Industries (Textiles), Jaipur, Mr. Tiku is in charge of handloom factories, hosiery factories, dyeing and printing works and textile training centres and peripatetic weaving parties.

SINCE the outbreak of the present war, parachute manufacture has proved one of the biggest and most interesting industries in India and besides helping the war departments, this industry is employing thousands of workmen. The manufacture of this class of fabric has at present been attempted in places such as Kashmir, Mysore, Bombay and Madras and lakhs of yards are produced every month. All these places have contributed a lot to the Indian Stores Department by supplying parachute cloth. This class of fabric, though simple in weave, can save the manufacturing concerns from a lot of rejections and loss if the technicalities are properly understood and followed.

Parachute cloth can be manufactured from different types of silk yarn, derived from Kashmir cocoons, Irani cocoons and the cocoons reared in other places. Much depends on the number of denier, count and the quality of yarn spun, as otherwise to maintain the standard or specification becomes impossible. The yarn should, as far as possible, be free of snarls and slubs, which if ignored at the time of winding, doubling and twisting, will appear in weaving and cause the piece to be defective or produce holes, and will not be suitable for parachute cloth. The work on winding, doubling and twisting should be carefully supervised and the workmen should be trained to cut or remove at once if there be any want of uniformity or snarls.

The first process of parachute manufacture is soaking. The hanks should be well opened with two hands, and best soft soap, common oil should be well added with lukewarm water, and the yarn allowed to soak in it for at least one hour, and the soaked yarn should be dried a little in the shade and then taken to winding, doubling and twisting machine. The percentage of oil and soap should be 1 to 2 lbs. oil and 2 lbs. soap for 25 lbs. yarn.

Warping

The soaked yarn will facilitate a lot in warping and beaming and will be uniformly and easily woven by the weaver on the loom, as all the grease will disappear.

The pirns produced on the pirn winding machine should be taken in the steaming chamber and kept there from 2½ hours to 4 hours, according to the qualities of silk, and the temperature should not exceed 180° or be lower than 160°, because less of steaming will give a lot of breakages while weaving and will affect the texture and production to a large extent.

The following counts of yarn used will show the change in reed, picks and weight and will serve as guidance to the manufacturers to arrive at the correct specifications.

(A)

(1) Reed—52 (J)
(2) Warp—20/24-single.
(3) Weft—20/24-threefold 2nd twist (slight twist).
(4) Width—38″/39″
(5) Wheel—40 No.
(6) Weight of raw piece—5 lbs. 10 ozs./12 ozs. for 40 yds.
(7) Weight after degumming—3 lbs. 14 ozs. to 4 lbs. 1 oz.
(8) Drafting—Four single threads per dent or two threads of two heald shafts.
(9) Selvedge—20 threads by ⅔ (four and six threads).
(10) Production—22 yards for 12 hours.

(B)

(1) Reed—55 (J)
(2) Warp—28/32.
(3) Weft—28/32 (twofold 2nd twist).
(4) Width—38/39″.
(5) Wheel—42.
(6) Weight of raw piece—5 lbs. 3 ozs./6 ozs. for 40 yards.
(7) Weight after degumming—3 lbs. 1 oz. to 3 lbs. 12 ozs.
(8) Drafting—Same as in (A)
(9) Production—Same as in (A).

(C)

(1) Reed—55 (J)
(2) Warp—28/32.
(3) Weft—24/28 (threefold 2nd twist)
(4) Width—37/37½″.
(5) Wheel—38.
(6) Weight of raw piece—5 lbs. 14 ozs./6 lbs. for 40 yards.
(7) Weight after degumming—3 lbs. 14 ozs.

(1) Reed—60/Z (f) or 50 (J)
(2) Warp—22/32 or 24/28
(3) Weft—28/32 or 24/28 (threefold 10 turns per inch, left or right).
(4) Picks—98 to 102 per inch.
(5) Width—37″.
(6) Weight—7 lbs. for 40½ yards.
(7) Weave—Plain.

The above information given by me is based on practical experience gathered in manufacturing a few lakhs of yards, with not a single yard being rejected or found defective.

The weavers' work should be well supervised as he, having to work on piece wages, will care more for production than for quality. He should be asked to stop the loom and draw back the threads as soon as he finds any defect or sees the bad weft coming. All the pieces should be well inspected and examined in the presence of the weaver to show him the defects and make him cautious for the future.

Degumming of pieces should be done with 40 per cent. to 75 per cent. soap and the pieces boiled for 2 to 3 hours and then taken to the stentering machine for finishing.

The above information is based on the practical experience of the author, and any comments or criticisms will be greatly appreciated. Fuller details of quantities, numbers and formulas will also be supplied by him on application.

Rehabilitation of Silk Industry : Measures Taken in Italy and China

THE *Manchester Guardian* writes that two silk-producing countries have just taken steps to revive silk production on the greatest possible scale. The Italian Government gave silk-worm eggs immediately to breeders in all the silk-growing provinces and the breeders are urged to make an intensive effort to re-establish silk growing as one of the predominant branches of Italian agriculture. Economic production for the Germans had ended and silk producers have been told they can count on an excellent market at prices well above the present fixed rates.

In Free China, four Government banks have just approved a loan of 1,200,000,000 Chinese dollars to the Szechwan silk industry, which has recently made very great progress and is capable of further expansion. The loan is granted on the initiative of the Finance Minister who has reported to the Government that the Chinese silk industry can count on good prospects in the overseas market both now and after the war.

Post-war Reconstruction in Bombay Province

Official Proposals for Cottage Industries in Satara Taluka *

THIS is a report submitted for the consideration of Government on which Government has still to pass orders. Its genesis is as follows.

The Bombay Post-war Reconstruction Plan consists of numerous schemes grouped under various subject heads. Government wished to have a cross-section of this body of schemes as applied to a defined area in order to be able to estimate the staff, materials, and finance required for the execution of the post-war plan. Three talukas were accordingly selected for inquiry, one in each revenue division. The Satara taluka inquiry started first.

The small-scale cottage industries survey carried out by the Sir Purshotamdas Thakurdas Committee in 1940 did not disclose any great possibility of developing small-scale industries in Satara District. The expansion of the following activities were suggested:—Soap-making, bee-keeping, blanket-making and growing of cashewnuts.

At present there is a small power factory at Limb containing 20 looms employing 50 workers. Coarse quality cotton goods are prepared for sale in Satara City.

At Atit 26 weavers owning 38 handlooms turn out about 5,000 *saris* per year. These are sold in the local bazaars and in Satara by the weavers themselves. The Co-operative Department is trying to organize the co-operative management of this industry.

Sisal is grown in nearly all villages in the taluka and is made into ropes, etc. The American Marathi Mission and some other concerns in Satara have developed the manufacture of mats and other products on a small scale.

This industry seems to be capable of expansion and organization to an extent that the other village industries in the taluka are not. The treatment of sisal fibre is widely known among the scheduled caste Mangs who at present lack the experience and capital necessary to exploit their craft commercially. The Co-operative Department is contemplating the co-operative organization of this cottage industry.

There is a small silk weaving factory in Satara City and one or two small textile factories.

Among the Department's proposals for expansion the main is a proposal to establish an Industrial School for the teaching of carpentry, blacksmith's work and handloom weaving. In connection with this apprentice scheme will be run (Scheme No. 64).

The Industrial School, with objects similar to this, at present run by the District Local Board is not working satisfactorily. The reasons given are that the scholarships provided are inadequate and that the courses do not attract educated middle-class youths. It is considered by the public that generally the subjects taught can be learnt just as well at smaller cost by working direct under village craftsmen.

A site has been selected for the school and the plans are under the consideration of Government. In deciding to locate it in Satara City full consideration has presumably been given to the fact that there is at present no industry in Satara City to provide jobs for those who take courses at the school and that it will for that reason be difficult for the school to build up connections with industrial concerns. In addition training in rural crafts will form part of the training available in the rural development centre to be established in the district. The proposed school and the peripatetic demonstration parties will in any case serve the needs of Satara Taluka.

Under the cottage industries scheme (No. 108) peripatetic demonstration parties will be organized to give instructions in cotton-weaving, tanning, carpentry, fibre manufacture, etc. They should help to raise the standard of craftsmanship among the village artisans unable or unwilling to attend a school.

A district industrial association (Scheme No. 55) is also being started in the district by the Co-operative Department for the marketing of handloom products, etc. The headquarters of the association will be in Karad but it will work in the taluka.

The schemes are all organized on a district basis. The cost is as follows:—

	Capital. Rs.	Recurring. Rs.
Industrial School, Satara	1,14,000	7,792
Cottage Industries (Scheme No. 108)	12,000	20,000
Total ..	1,26,000	27,792

The proportionate cost of these facilities for Satara Taluka is approximately one-tenth of these figures, i.e., capital Rs. 12,600, recurring Rs. 2,800 per annum.

It is proposed to start all these schemes after the end of the war and no development is possible now. In the meantime the department might consider the measures necessary for the extensive development of sisal manufacture and the suitability of Satara City as a site for the proposed industrial school.

Note.—The numbering of the schemes given here refer to the serial number in the official list of post-war reconstruction schemes.

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* Price, Re. 0-5-0. Government Book Depot, Charni Road Gardens, Bombay.

Flock of sheep out grazing

Indian Wool Industry

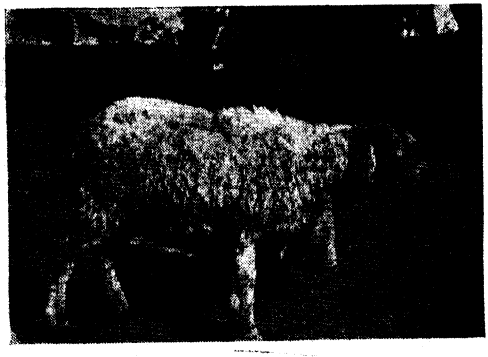
Noteworthy Experiment at Patan

By M. H. SHAH, M.A.

(*Specially Contributed*)

EVERY morning the shepherd takes out his flock to graze on the shrubs and grazing grounds on the outskirts of the villages and returns home before sunset. This is his daily routine throughout the year. In a few Indian villages, however, if grazing is not available during summer he moves to the nearest available waste land around canals or rivulets and stays there for two months—April and May—returning home before the rainy season commences.

This is a very familiar spectacle to those who stay in the countryside. Apart from the familiarity, the shepherd and his sheep possess great utility for society. The shepherd forms an important part of the rural community. Though his main occupation is keeping the flock he does several jobs at a time with the help of his flock. He takes his flocks to the fields and keeps them there for a day or two with a view to supplying manure to the field. The milk that he gets from his flock he sells in the village. Lastly, he shears wool from sheep and thus supplies raw materials for our woollen goods.



Patanwadi Sheep

The Indian Wool

Not much attention has been paid to the wool industry in India till now. India is certainly a deficit country so far as wool is concerned. Moreover, the Indian wool is generally considered suitable for carpets, blankets, etc., and not for woollen cloth. It would, therefore, be in the fitness of things if post-war reconstruction takes note of the wool problem and encourages production of wool, and that too quality wool, as well as its manufacture in India.

Origin of Merino

The most important centres of whatever wool is produced in India are Kashmir, Jodhpur, Baroda and Central India. Wool produced at these places is certainly very good but it lacks systematic organization of production, which reduces its value. The finest wool on the earth is Merino wool produced in Australia. About the origin of this Merino it is said that Central India, especially the borders of Rajputana and the desert area round about it, is the spot where the best wool on earth was produced and so sheep of this area were imported into Australia in the past and the Merino variety evolved by select processes of breeding. This is the opinion of the wool experts but we have no other proof to offer in support of it except that sheep which yield very fine quality of wool are still found in this area.

Patan Wool Area

The State of Baroda lying in the middle of this quality wool producing area has in Mehsana District a fine wool producing centre at Patan which tackles the wool of this northern district of the State. In the beginning a survey of the quality of wool was conducted by collecting samples of wool directly from the sheep of sampled villages of each and every taluka in the State and subjecting them to laboratory analysis. It was discovered as the result of these analyses that the best types equalling in quality clothing types of wool came from the northern area of the Mehsana District.

Wool Statistics

In the year 1940, there were in the State 159,794 sheep and 349,652 goats. The following table shows the variation in this number since 1930.

	1930	1935	1940	Increases
Sheep ..	108,269	166,305	159,794	49.7
Goat ..	238,788	250,101	349,652	43.3

Calculated on the basis of 15 animals per family the sheep industry supported 10,653 families consisting of 53,265 persons while the goat industry supported 23,300 families consisting of 116,500 persons. In all 169,765 persons were supported by this industry in the State.

Wool and Our National Wealth

Apart from its number and the number of persons to which it gives occupation, the sheep and goat industry has a quota in the national wealth. The economic value of sheep and goat products in the State is estimated to be not less than Rs. 32 lakhs per annum.

Grouping the Breed

The sheep in Baroda State can be grouped into the following breeds or

Wool spread on a table for preliminary grading varieties, according to the quality of wool that they produce.

1. The Patan sheep variety. 2. The Charoter or Chanothri variety. 3. The Cutchi variety. 4. The Marwari or Kathiawad variety.

Patanwadi. Medium-sized, curved-nosed, dark tobacco-brown-faced, woolly sheep existing in pure forms, in northern talukas of Mehsana District, Radhanpur and Palanpur States, up to southern parts of Marwar.

Chanothri. Stationary, large-sized, fawn-faced, long-eared, hairy sheep extending from the southern parts of Mehsana District to Deccan.

Cutchi. Nomadic, medium-sized, black-faced, medium-woolled sheep, coming from Cutch, and moving about in thousands in this tract in search of pastures.

Marwari. Large-sized, black-faced, long-eared, rough-woolled, coming from Marwar and Rajputana, and moving about in this tract in search of pastures in thousands.

Quality of the Wool

The quality and value of the wool is mainly dependent upon three factors: (1) diameter of the fibre, (2) length of the fibre, and (3) the percentage of medulation, i.e., the ratio of the diameter of the hollow air space in the middle of each fibre to the total diameter. Of course, many other factors such as the percentage of hairy fibres, kemp, crimp, shrinkage and spinning properties are also to be taken into account.

The Baroda Government sent about 400 samples of wool from the different taluks in the Baroda State to the wool Analysing Laboratory at Poona. The results of the analysis of these samples confirmed the belief that Baroda State possesses much finer quality wool-bearing sheep and can safely concentrate on the production of finer quality wool used for cloth or hosiery which fetches much higher prices in the market.

Patan Experiment

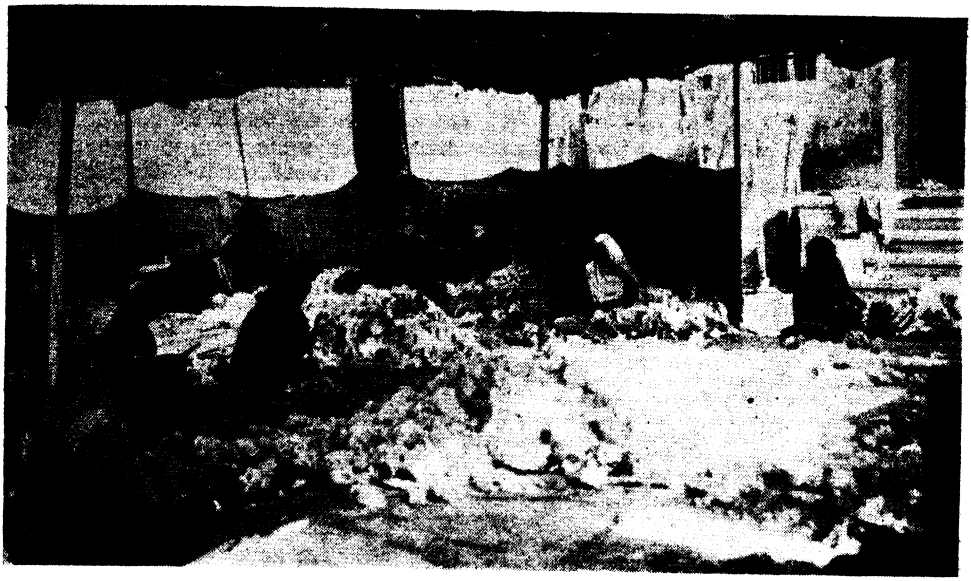
As a result of these investigations, it was found that there existed in the State great possibilities of sheep breeding and the wool industry. Accordingly, a scheme of sheep breeding and improving the quality of wool along with the shearing, grading and marketing of wool was framed and put into effect for five years from August 1942, at Patan, a place with a glorious past. The scheme was divided into two main sections: (1) Development section, comprising a central farm, laboratory and other activities, for preserving, improving and extending the Patanwadi breed, and (2) marketing section, for shearing, classing and marketing of wool.

Development Section—Farm.—The farm was established with a view to evolve a first class stud stock possessing all the desirable characteristics of a fine-woolled sheep from the Patanwadi type, and breeding true to type in the course of five years, for production and distribution of improved and reliable rams for distributing to private breeders.

It was first of all necessary to gather together a foundation stock phenotypically uniform in wool quality and type, so that a genotypic selection could be made out of them by breeding trials at the farm. During the first year, 100 ewes and 10 rams were purchased by hand selection, and their samples of wool were analysed at the laboratory. By studying the ranges obtained for each character, definite standards were set up, and a system of scoring for wool quality was established. Hereafter the culling of animals is to be done according to the marks obtained by them. Setting up of standards in arithmetical expressions very much helps in obtaining uniformity, defining improvement and avoiding neglect of other characters, while concentrating improvement on one character. Breeding trials are now being conducted to ascertain the genetic nature of each animal and the final selection of breeding stock will depend upon the results of these trials.

The farm extends over an area of 317 bighas. It has four sheep paddocks, shearing sheds, water supply, cattle dip, sheep runs, etc.

Laboratory.—The laboratory was established, firstly, to guide the farm and other private breeders, in the selection of breeding stock and controlling of breeding policies, and secondly to help the wool marketing section to maintain and standardize the quality of different grades, by testing samples of classed wools. The laboratory is now in a position to record the following attributes of wool: length, crimp, diameter,



Cleaning and deburring of wool

medullation (in number of medulla fibres), tensile strength, and scouring loss.

Training the Shepherds.—To secure substantial improvement, at an increased pace and over a wide area, an organization through which the breeding policies of the masses of shepherds could be brought to a uniform standard was found necessary. Propaganda regarding the improved methods of husbandry and shearing and classing of wool in all the nooks and corners of the sheep breeding tract was included as a very important part of the wool improvement programme. The increased income secured for the shepherds immediately by the marketing section was a powerful factor in securing their cooperation.

New Plans.—Steps are being taken to bring into force the following additional plans with the above objects in view:—1. Forming a Patanwadi Breeders' Association, and introducing flock books. 2. Assisting the shepherds to maintain only pure-bred flocks. 3. Purchasing of ram lambs from the sheep breeders (which in the usual course would have gone straight to *pinjarapoles*) and maintaining them at the farm for distributing to other breeders. 4. Running a course of training in sheep husbandry, shearing and classing of wool for shepherds at the farm.

Marketing Section

Marketing is the crux of the problem of all small industries in India. To secure higher prices for the wool of the shepherds, a special marketing section was put up at Patan. In operating this section the fleece on the sheep was to be purchased at local market rates. The sheep would then be shorn and the wool classed into different grades, cleaned, deburred and marketed. Part of the profits realized would go back to the shepherds as bonus. This section has just completed two seasons' work with great success.

Booking the sheep.—About two months prior to the shearing season the members of the staff tour in the villages from where it is proposed to purchase the wool. They carry on propaganda about the benefits to be realized by selling their wool to the Government, and collect applications from those who are willing to do so. All the applicants who agree to abide by the rules laid down are given an advance of money and thus contracts are made.

Shearing centres.—According to the villages where sheep have been booked, shearing centres are chosen about one for six villages, and a detailed programme is drawn out fixing the time and place for shearing the sheep of each shepherd. Information is sent to each shepherd a fortnight before the shearing date about when and where he has to bring his sheep for shearing. Washing of sheep is quite common in these parts and is always observed.

Village Shearing teams.—Meanwhile shearing teams are formed, each consisting of one supervisor, one grader and four shearers, engaged temporarily for the season. Other labourers like shed hands and piece pickers are employed locally at each centre. Each team is equipped with a skirting table, a big piece of cloth on which the sheep are shorn, gunny bags, needles, thread, and stationery. Each team is able to handle on an average 4,000 sheep. This number entirely depends upon local conditions, i.e., the number of sheep in that area, and the co-operation offered by the shepherds.

The shearing period is generally about one month during which all the sheep booked will have to be shorn. Each team moves in a definite area assigned to it from centre to centre as planned before. According to programme the team moves to the village centre, on the appointed date, and camps there. Turn by turn the sheep of all the members are shorn and the wool collected in bags.

Grading.—As each sheep is shorn the shed hand picks up the fleece holding the margins and places it on the skirting table with the body side below. The grader first skirts the coarse, dirty and seedy edges, which are packed separately, as skirtings. The coloured part of the fleece coming from neck regions is then separated and collected as "colour" or third grade. The remaining white fleece is divided into two parts, body and breech, and each is placed in the super, first white or second white, according to its quality. It is here that the grader displays his skill in classing.

Storing the wool.—The different grades of wool thus collected are sent by bullock carts or whatever transport is available to the godown accompanied by a despatch voucher in which is detailed the number of sheep shorn and the weights of different grades of wool collected. This is again checked by the store clerk when he receives it. The team, after despatching the wool moves on to the next centre and observes the same routine until the part of shearing allotted to it is completed. The wool at the godown is deburred, cleaned and packed by engaging labourers. Offers are called for by sending samples to various commission agents and mills, and the wool is sold to the highest bidder.

Tweeds from Baroda wool.—The first two collections were sold to Dinesh Mills, Baroda. And they were able to spin up to 14 counts out of the first collection and up to 16 counts out of the second and manufacture very attractive and high class tweeds out of both. Out of the profit earned it was possible to distribute to the shepherds 25 per cent. of the current rates as bonus, during both the seasons.

Progress

In the first year of the scheme, i.e., 1942-43, a total profit of Rs. 1,483 accrued from the scheme. Out of this Rs. 918 were distributed among the shepherds at 1¼ anna per sheep. The shepherds who sold their wool to the centre received 25 per cent. more income per sheep than those who sold it to the merchants. The second year, i.e., 1943-44, brought a net profit of Rs. 2,237 out of which Rs. 1,398 were distributed to the shepherds at 1½ annas per sheep. Thus the shepherds are getting more and more income per sheep.

During the short period of two years, the Patan wool improvement scheme has made quite good progress, as shown by the following table.

No. of sheep shorn.		No. of villages covered.		No. of shepherds benefited.		No. of village shearing centres.	
1942-43	1943-44	1942-43	1943-44	1942-43	1943-44	1942-43	1943-44
11,751	14,913	97	102	297	381	16	17

Thus the Patan experiment is making good headway, though it has touched only a small fraction of the trade and the persons engaged therein. Looking to the possibilities of the scheme, it would not be out of place to suggest that the experiment should be rapidly enlarged to cover the entire sheep and shepherd population of the State. The Patan experiment may also indicate lines of progress for other places.

Review of the Trade of India, 1942-43

Trends During the Year

INCREASE in the area under all the important crops except cotton, expanding demand for industrial products, industry more fully geared to war-effort, higher industrial profits than in any previous year since 1928, phenomenal rise in the general level of prices, and a sharp decline in the volume of foreign trade, the value of both exports and imports declining—these were among the outstanding features of India's economy in 1942-43, according to the " Review of the Trade of India."

Industries : Prosperous Conditions

The general level of industrial profits during 1942 was substantially higher than in the preceding year or any other year since 1928. The chain index for that year showed a rise of 25 per cent. as compared with 1941 and of 69 per cent. as compared with the base year 1928. With the exception of sugar and coal, all other industries declared higher profits than in the preceding year.

The production of cotton piecegoods, jute manufactures, paper and coal showed a marked decline during the year. In the case of the first three industries, the decline was mainly due to coal shortage and labour difficulties. The general industrial situation, however, was characterized by a greatly increased demand for manufactured articles of all kinds, both because of the intensified war effort of the country and the expansion of civilian purchasing power. This must have inevitably brought about a substantial increase in the output of several other industries which were comparatively free from the difficulties mentioned above. The total value of orders placed by the Supply Department amounted to Rs. 256 crores, as compared with Rs. 184 crores in the previous year. The productive capacity of many industries was greatly extended and several products which were wholly imported before the war were now being manufactured in India. New chemical plants were coming into production and further development was contemplated. Under the stimulus of war demand, both raw silk and silk weaving industries made considerable progress.

Trend of Foreign Trade

Trading conditions were generally less favourable than in the preceding year. The volume of foreign trade showed a sharp decline. The value of exports of private merchandise from British India declined from Rs. 238 crores in 1941-42 to Rs. 188 crores in 1942-43, while the value of imports declined from Rs. 173 crores to Rs. 110 crores.

The exports of the principal groups of commodities, with a few exceptions like cotton manufactures, decreased considerably as compared with the preceding year, the largest reductions being under jute manufactures and raw cotton. The cessation of Japanese competition, however, gave a great fillip to cotton manufactures, the exports of which increased from Rs. 36 crores in 1941-42 to Rs. 46 crores in 1942-43. The other important exceptions to the general declining tendency of exports were haberdashery and millinery, silk and silk manufactures.

The import trade in respect of all important groups of commodities suffered heavily. Imports of cotton yarn and manufactures registered a considerable decline. Imports of machinery were also reduced and those of chemicals, drugs and medicines also declined. The one important exception to the general trend was raw cotton, the imports of which showed an increase.

Comparing the figures for 1942-43 with those for 1938-39, it is observed that imports of manufactured articles declined from Rs. 92.7 crores in the pre-war year to Rs. 49.6 crores in 1942-43. Imports of raw materials, on the other hand, increased from Rs. 33.2 crores to Rs. 51.9 crores. Exports of raw materials, which used to figure largely in India's export trade in the past, fell off considerably in recent years and were valued at Rs. 42.7 crores in 1942-43 as against Rs. 73.3 crores in 1938-39. These changes in the composition of India's trade can be attributed to several factors, but they are at least partly explained by the progressive trend of the country's industrial economy.

OUR PERSONAL COLUMN

King's Birthday Honours

His Majesty the King-Emperor's latest Birthday Honours List includes the following:—

C.I.E.

Mr. Chandulal Chunilal Desai, Controller General of Civil Supplies, Government of India.

Knighthood

Mr. Har Govind Misra, O.B.E., Millowner, Cawnpore, United Provinces.

O.B.E. (Military Division)

Lt.-Col. J. C. Morton, Indian Army Ordnance Corps, Bombay.

Khan Bahadur

Khan Sahib Jamshed Sorab Cama, representative of the *Times of India*, Ahmedabad.

Rao Bahadur

Sri Venkataswami Naidu Gopal Naidu, Managing Agent, the Coimbatore Spinning and Weaving Co., Ltd., Coimbatore.

Mr. Mahadev Balakrishna Jambhekar, Director, Kirloskar Brothers and Managing Director, Kirloskar Brothers, Harihar, Mysore.

Rao Sahib

Mr. Krishna Iyer Shrinivasan, Private Secretary to the Chairman, Textile Control Board, Bombay.

Mr. Mangari Seshadri Ramnath, Deputy Director, Office of the Textile Commissioner, Bombay.

Khan Sahib

Mr. Dhunjisha Sorabji Bharucha, a Mill Store Supplier of Bombay, is the recipient of the title of Khan Sahib in the King's Birthday Honours.

Having left college, Mr. Bharucha joined Messrs. Greaves Cotton & Co. in 1912 as a clerk on a salary of Rs. 25 p.m. He served this firm for about 10 years and then joined Messrs. Macbeth Bros. & Co., Ltd., where he worked till 1926. Afterwards he worked as an engineer-salesman in the firms of Messrs. Siemens (India) Ltd., and Western India Oil Distributing Co., Ltd., and as a salesman in the firms of Messrs. Card Clothing and Belting Co., Ltd., and the Sizing Materials Co., Ltd. For about nine years from 1928 he was Head Stores Purchasing Officer of the Tata Group of Mills and the Binod, Deepchand, Hira and other mills of Ujjain up to 1938. Latterly he was Manager of Messrs. Hind Trading Co., Bombay, suppliers of dyestuffs, auxiliaries and millstores.

MR. DHUNJISHA SORABJI BHARUCHA

During the last war, Mr. Bharucha worked as an Instructor at the Queen Mary's Technical School for Disabled Soldiers, and his name was mentioned in the Despatches of 1918. For his work in this connection he was awarded a War Badge and a Certificate of Merit by the Government of India. He was gazetted a Captain of the Bombay Battalion, was a 2nd Ambulance Officer of the St. John Ambulance Brigade Overseas and holds a Long Service Medal with three bars for efficient and loyal services.

Mr. Bharucha has trained hundreds of officers and workmen of mills, factories and workshops, in ambulance and A.R.P. subjects. Immediately the present war broke out, he joined as an honorary Senior Warden, and was responsible for training a large number of A.R.P. wardens and others at Ghatkoper, Bandra, Parel, Byculla and Colaba.

In recognition of these honorary services he has been given the title of Khan Sahib. The St. John Ambulance Association have also admitted him as an Associate Serving Brother of the Order of St. John of Jerusalem.

Khan Sahib Bharucha is an elected life member of the Indian Chamber of Engineers, New Delhi, a member of the Mechanical Engineers' Association and the Institute of Master Salesmen.

H. E. Field-Marshal Viscount Wavell who had proceeded to England for consultation with His Majesty's Government, has returned to India and resumed the office of Viceroy and Governor-General of India and Crown Representative.

His Excellency the Right Honourable Sir David John Colville, who was acting as Viceroy and Governor-General, resumed charge of the office of the Governor of the Province of Bombay on the afternoon of 4th June.

The engagement is announced between **Major Alan Christopher Cowell,** M.C., the Indian Parachute Regiment, younger son of the late E. F. Cowell and of Mrs. Cowell, Wendy Lodge, Letchworth, Hertfordshire, and **Muriel Dorothy Marsden,** Subaltern, A.T.S., only daughter of Mr. and Mrs. Ben Marsden of Ahmedabad, India, and Blackburn, Lancashire. Mr. Ben Marsden is a leading millowner of Ahmedabad.

An exquisitely chiselled bust of the late **Mr. Mafatlal Gagalbhai,** Managing Director of the Mafatlal Gagalbhai Group of mills, was unveiled by Rao Saheb Kantilal Ishwarlal at the Mafatlal Gagalbhai Swimming Pools Gardens at Chowpatty, Bombay, recently before a distinguished gathering.

Mr. B. N. Kaul, Deputy Secretary, Government of India, Department of Industries and Civil Supplies, has been appointed Special Officer, Census of Production, and Director of Industrial Statistics.

Mr. Oscar Von Kohorn to Visit India.—We have been informed by Messrs. Duncan Stratton & Co., Ltd., 5, Bank Street, Fort, Bombay, that they have been advised by cable by their principals, Messrs. Kohorn Company of New York, U.S.A., that their special representative, Mr. Oscar Von Kohorn, is expected to visit India very shortly and intends to stay in this country for a sufficient length of time to enable him to examine the possibilities of establishing an artificial silk industry here.

The General Electric Co. (India) Ltd.: Changes in Executive Personnel.—The General Electric Co., Ltd., announces a number of changes in managerial positions in their organization in India—The General Electric Co. (India), Ltd.

For health reasons Mr. E. J. Warren, their General Manager in India, has retired from that position and for similar reasons Mr. C. E. Cutting has retired from the management of the branch in Madras. Mr. A. J. Emery who has been in charge of the Bombay branch has been appointed to succeed Mr. E. J. Warren as General Manager in India and Mr. T. G. May who was for many years in the Calcutta branch has been appointed Manager of the Bombay branch. Mr. J. Meek who was Engineer at the Madras branch has become Manager of that branch.

Mr. L. Donegan, Director of the well reputed and century old established firm of Messrs. George Wills and Sons, Ltd., of London and Manchester, has just returned to England after discussing proposals for the development of their post-war business activities, through their friends, **Messrs. Nagindas Kilabhai & Co. of Bombay, Ahmedabad and Calcutta,** in textile mill stores, leather goods, sizing and finishing materials, dyes, chemicals, etc. In this connection it may not be out of place to mention that Messrs. Nagindas Kilabhai & Co. are a large firm of longstanding reputation dealing in all textile mill stores and have been appointed as the Sole Distributors for India, through Messrs. George Wills and Sons, Ltd., of Messrs. John Tullis and Son, Ltd., Glasgow, manufacturers of superior and ultra durable leather beltings, roller skins, picking bands, pickers, buffers, etc.

Photo : Hamilton Studios, Bombay

Mr. B. L. Vyas, L.T.M. (Hons.), has joined the Chalisgaon Shree Laxminarayanan Mills Co., Ltd., Chalisgaon, as a Weaving Superintendent from the 1st of June 1945.

Mr. David Abraham, Manikchand's Bungalow No. 1, Modikhana, Sholapur, India (Bleaching and Finishing Master, Lakhshmi Mills, Sholapur), and **Mr. N. G. Devadhar,** Bhide Colony, Railway Lines, Sholapur, India (Superintendent, Lakhshmi-Vishnu Mills Technical School) have been recently elected to ordinary membership of the Textile Institute, Manchester.

Lord Linlithgow, formerly Viceroy of India, was elected President of the Empire Cotton Growing Corporation, Manchester, on 5th June 1945.

Sir Frank Platt has resigned from the post of British Cotton Controller, England, with effect from 15th June and is succeeded by Mr. R. W. Lacey.

Sir Jeremy Raisman, former Finance Member, Government of India, has been recently selected as one of the Directors of the Finance Corporation for Industry, Limited, London, of which Lord Hyndley is the Chairman.

Sir Homi Mehta, K.B.E., the well-known Bombay banker, millowner and industrialist who has accepted the invitation of the Commander-in-Chief in India, Sir Claude Auchinleck, to inquire into and report on welfare arrangements and amenities for Indian troops in the Middle East, left India on a ten weeks' tour of England, Egypt and other Middle East countries early this month.

Sir Homi is accompanied by his son Mr. Mani H. Mehta, Secretary of the Bombay War Gifts Fund. The latter will see how the War Gifts Funds have been spent for the welfare of Indian troops in those areas.

Sir Homi Mehta said in an interview, referring to the heroic deeds of Indian troops, " these brave sons of India have raised the prestige of India enormously over all the great countries of the world. These lads will really bring Dominion Status and freedom for India by their brave deeds. All glory to them."

Sir Homi will visit the Indian armies and see for himself the conditions. " I have accepted the invitation of H.E. the Commander-in-Chief," said Sir Homi, " and shall give my report and make a statement of facts without any reserve. People have trust in me and I shall not belie the trust."

As at present arranged Sir Homi and Mr. Mani Mehta will inspect camps in the north of England for Indian ex-prisoners of war and also meet Indian prisoners rescued from concentration and other detention camps on the Continent. On their return they will visit Egypt, Palestine, the Middle East, Iraq, Iran and other theatres of war where Indian troops are serving.

After finishing his tour of Italy on the way Sir Homi is now in England.

Mr. Matadin H. Khaitan, Director of Morarjee Mills and partner of Messrs. Agarwal & Co. (Managing Agents of the India United Mills Ltd.) will be leaving for the United Kingdom, the U. S. A. and Brazil early in August. Mr. Matadin Khaitan will be accompanied by his Public Relations Officer, Mr. R. S. Ayyar, and a party of technicians whose names will be announced later. The object of the visit is to study textile conditions and the scope for the betterment of Indian cotton exports in the world's markets in the post-war period, with particular reference to the rapid strides made by Brazil in war-time. The party will stay six months in England and six months in America, visiting all the important industrial centres of both the countries.

Obituary

Dr. N. K. Sen, Director of Industries, Government of Bihar, died at Calcutta on 3rd June 1945 at the age of 56 after a protracted illness.

Dr. Sen began his career as a Professor of the Calcutta University and was for several years Director of the Indian Lac Research Institute, Ranchi.

Sir Martin Forster, who had settled down in Mysore after retirement as Director of the Indian Institute of Science, Bangalore, in 1933, died on 24th May 1945. He was a great friend of Sir Dorabji Tata who invited him to accept the Directorship of the Indian Institute of Science in 1922 which post he occupied till he retired.

To Sir Martin is due the successful reorganization of the work of several departments in the Institute by attracting eminent scientists like Dr. J. L. Simonson, Dr. R. V. Norris and Prof. K. Caterson-Smith. His special field of research was Azo compounds, a field wherein he dealt with dangerous explosives. Work on such subjects meant a thorough knowledge of the nature of the compound and required great skill in handling them.

Mr. D. F. Hathiram

We regret to record the death of Mr. Dara Framji Hathiram, Carding and Spinning Master of the Indore Malwa United Mills Ltd. at Indore on 15th April, 1945 at the early age of 35. He was a well-known sportsman and was the eldest son of the late Mr. Framji Dorabji Hathiram, who was the late Carder, Spinner and Manager of the Colaba Land and Mill Co., Ltd., Bombay.

At the early age of eighteen, Mr. Hathiram left his scholastic career and joined his father as an unpaid apprentice. Afterwards he was in the Assur Virjee Mills and Phœnix Mills.

In order to better his prospects he joined the firm of Card Clothing and Belting Ltd., Bombay, and was for many years a foreman-in-charge under the late Mr. E. T. Cooke, who was an expert carder and manager. Afterwards he worked with his father as an Assistant Carder and Spinner in the Bharat Abhyudaya Mills Ltd., Calcutta.

After acquiring a thorough knowledge of his line he joined the Seksaria Cotton Mills Ltd., Bombay, as a Carding Master and by his honesty and hard work, he rose step by step to the responsible post of Carding and Spinning Master.

While thus employed in the Seksaria Mills he was asked by the Manager of the Card Clothing and Belting Ltd. to work as a Technical Adviser in their Works as a part-time worker. During his service with this firm he was sent many times as a Technical Adviser to the Buranpur Tapti and various other mills.

In October 1943, he was transferred to the Indore Malwa United Mills Ltd. as a Carder and Spinner and was employed there till his untimely death. He was an expert carder and his skill in this branch of textile industry was greatly appreciated.

Mr. Hathiram was an all-round athlete and was interested in wrestling, weight-lifting, cycling, swimming, shooting and had numerous trophies to his credit in these branches of sport. In 1927 he figured prominently in the Bombay Presidency Olympic Wrestling Tournament and was awarded a medal. As a representative of the Zoroastrian Physical Culture and Health League Mr. Hathiram competed in the All-India Weight-lifting Championship at Calcutta when he acquitted himself with credit. He won many gold and silver medals in wrestling and weight-lifting tournaments. A first-class shot, he had been honoured for his marksmanship by the Army Rifle Association and by his own unit of the 2nd Bombay Urban infantry.

Industry Must Finance Research

" While academic chemists working in university laboratories have been responsible for many discoveries in textile chemistry, it is a remarkable fact, whose significance must be brought to the notice of those in authority in our textile industry, that the great advances in the chemical processing of textiles . . . have been possible mainly on account of research conducted and subsidized by the industry itself. Organizations such as the Imperial Chemical Industries, du Pont, and the Tootal Broadhurst Lee Co., have long been aware of the necessity for continuous and intensive research, and they have not only organized research on a large scale under their direct auspices and for their own immediate purposes, but have also actively encouraged, by substantial subsidies, the pursuit of fundamental investigations with no obvious practical value." (Dr. K. VENKATARAMAN, Director of the Department of Chemical Technology, University of Bombay, in the GOLDEN JUBILEE SOUVENIR of *the Indian Textile Journal.*)

The Late Mr. Henry Gannon

WE regret to record the death in England of Mr. Henry Gannon, Managing Director of Messrs. Gannon Dunkerley & Co., Ltd., Bombay, a well-known and old-established firm of importers of millstores and machinery and civil contractors. Mr. Gannon went home last year and died after a serious operation on 13th of May in London at the age of 76.

Mr. Henry Gannon was one of the oldest European residents of Bombay, having come out to India in 1894 as Manager of Felber Jucker & Co., Ltd. He started his own business in September 1910 as Henry Gannon & Co., and took over the firm of J. H. Dunkerley, textile machinery experts, in November 1919 when the firm under its present name of Gannon, Dunkerley & Co., was formed.

The firm of J. H. Dunkerley was originally started by Mr. J. Herbert Dunkerley who had entered into business as a cotton machinery agent in 1895 after his retirement as Manager for 20 years of a group of seven spinning mills under the agency of Greaves Cotton & Co. Mr. Dunkerley was agent for the famous spinning machinists, Tweedales & Smalley Ltd., which agency was also taken over by Mr. Gannon with the other business.

After the firm of Gannon Dunkerley was converted into a limited liability company in 1924 it established its branches in various parts of the country and in addition to its textile business is now well known as leading military and civil contractors.

Mr. Henry Gannon's advice as a textile expert was sought by many prominent millowners of this country and from 1894 onwards he was responsible for the equipment of many textile mills in Bombay and other parts of India with spinning, weaving, and bleaching and dyeing machinery.

Of a social and charitable disposition, Mr. Gannon interested himself in the activities of welfare institutions, having been Vice-President of the Society of St. Peter and Hostel for Children. He was very widely known in music circles in Bombay and was a keen member of the Bombay European Textile Association.

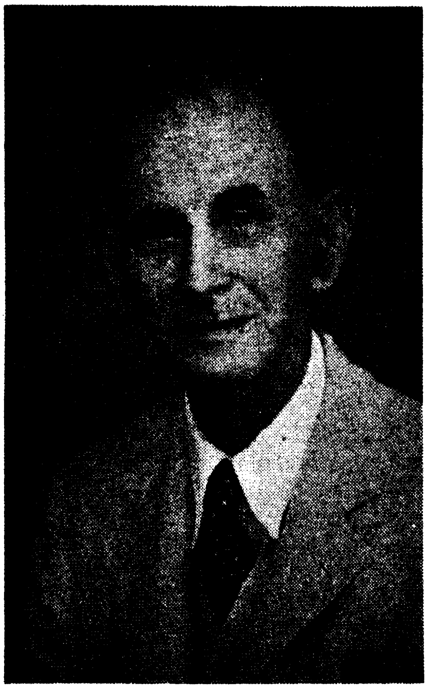


Photo: Clifton Studios, Bombay

His reminiscences, which Mr. Gannon always loved to tell with great enthusiasm, were contributed by him specially in the *Golden Jubilee Souvenir* Number of our magazine. These are reproduced below as they are equally interesting and of topical value even to-day.

Progress in Processing

The mid-nineties when I arrived in India saw Bombay in a more or less primitive state. The vast bulk of the trade was in low count China yarn when the cotton was simply pushed through the process. Most of the mills had in the blow-room, say, double Crighton opener (sometimes with the old crude porcupine feed) and three lines of scutchers. There were no hopper feeders which were introduced in England in the early nineties by Hetheringtons. Flat cards were already general; only a few roller cards were used on the lowest counts. Ring frames had ousted flyer throstles (which latter, I gather, had never been popular in Indian mills) and for China yarns the mule was more favoured than rings. Of course, there were no "refinements" on any of the machines in those days.

However, some millowners had already gone all out for ring frames a considerable time before my arrival, the David No. 1 Mill, Bombay, being built in 1888 with 30,000 ring spindles. Nevertheless, when No. 2 was erected in 1899 about half the spindles were mule—no weaving, of course.

The mills that followed about the time I landed followed the same system and the Kohinoor Mill, Bombay, erected about 1898, was going on nearly half mule spindles. The theory was that a cheaper mixing could be used for mules for a given count, especially low counts.

Shortly after the turn of the century the mule rapidly fell out of favour with the result that practically all mills installed rings both for reeling yarns and weaving. The first was Finlay Mills in 1907 with 40,000 spindles and weaving. Here I might mention that the Textile Mill went up in about 1897 with all ring spindles, but weaving was in mind.

When I landed, rings had already been installed in mills *for weaving*. This transition evidently took place when the ring frame was generally introduced towards the end of the eighties. Those early frames were equipped with the original Rabbeth spindle with a brass liner—no inner tube.

Now as regards weaving. This was primitive to a degree in Bombay; mill agents were essentially concerned with China yarn which were easily produced, and sales for 10,000 bales or so at a time in one or two counts were the vogue. Most of the concerns simply turned out a low grey " sheeting " which passed through the folding machine and then baled up.

The first calenders, 4-bowl-cum-19-cylinder finishing machines, had just been introduced in one or two mills. Dyeing in the modern sense did not exist; when colours were introduced there were the wood dye vats for yarn. However, I did note that the Petit group of mills did make something more of weaving and made a commencement in " fancies," that is, mostly broadcloth with coloured stripes. Nowrosjee Wadia was Superintendent and I should conclude he had only weaving in mind when he made his first essay and built the Textile Mills about the year 1897, following 2-3 years with the Century Mill, also weaving. Certainly Wadias were not running after the China yarn business.

There were some dobby work and also some old-fashioned drop box looms. The Eccles drop box came along first at the end of the nineties. With the great fall in yarn export, the spinning mills were forced on to weaving with the result that many sheds went up in 1900-10. Naturally, there was not " room " for all of them on the plain greys with the result that better grades had to be produced calling for finishing processes, etc. Speaking from memory, the first large-scale bleaching, dyeing and finishing plant, on modern lines, was installed at the Khatau Makanji Mill some 35 years ago. The Manockjee Petit Mill soon followed with a similar plant.

As concerns up-country mills, these in the main were both spinning and weaving. They could not compete for the vast China yarn trade.

It is interesting to note that in those early days Ahmedabad sheds produced a superior yarn and cloth as compared with Bombay. This was due to the fact that they were concerned greatly with the *dhoti* trade calling for better yarn and weaving. These mills were the principal buyers of the best Surat cottons for such *dhotis*. I can still remember the first calender in Ahmedabad, a 4-bowl one, installed by Rileys.

From the foregoing notes it will be possible to follow the broad transition from elementary coarse grey cloths to what is produced in these days. It is truly astonishing. Ever since the last war, when Manchester realized that the lower grade Indian cloth trade had been lost for all time, my friends there used to take consolation in the " fact " that anyhow Indian mills could not encroach on the finer trade, that is, over, say, 60s, due to climatic conditions. I assured them that a beginning had already been made on finer yarn and that with the aid of modern humidification anything was possible. However, they persisted in cherishing the legend concerning Lancashire climatic conditions and, above all, the inherited superiority of the Lancashire operative as a craftsman. Of course, it was a case of " wishing, thinking."

New U.S. Starch Material

A NEW material from starch, with potential industrial uses in lacquers, resins, paper and textiles, is reported to the American Chemical Society, says *The Journal of Commerce*.

It is allyl starch, produceable as a soft, gummy material or as a powder. This starch, which forms a hard, durable coating on exposure to air, can be made from potato and sweet potato starch, corn-starch, and tapioca dextrin.

When dissolved in ordinary lacquer solvents, the research workers explain, allyl starch can be used as a protective and decorative coating for wood, glass, metal, and other surfaces. Because of its high resistance to various solvents, to heat, and to solutions of acids and alkalies, it is being tested by several manufacturing concerns as a lacquer and varnish for household and office furniture and other articles. " It can be used for coating and impregnating paper and textiles, and it acts as a thermosetting adhesive suitable for preparation of laminated products," the report adds.

" Allyl starch can also be used for the preparation of rigid plastics. When compounded on a rubber mill with various ingredients, including sulphur and vulcanization accelerators, and ' vulcanized ' in a press, the gummy material forms a rigid plastic which is highly resistant to various solvents and other chemical reagents. The milled product, when placed between layers of wood, paper, or cloth, and heated under pressure, yields laminated materials of various degrees of strength and usefulness."

Allyl starch can be made in large quantities, the report said, in a process using air-dry starch, sodium hydroxide, acetone, and allyl chloride. The allyl starch contains about two allyl groups per glucose unit.

Future of Cottage Industries in India

Should They Survive?

By Dr. P. J. THOMAS, *Director of Research, Government of India*

"It is indeed desirable that cottage industries should survive, but it is no good their surviving as a relic of primitive economy, as a symbol of sweating and low living standards. They must survive and grow strong as the corner-stone of a healthy decentralized modern economy which will maintain in freedom millions of families on a reasonable standard of comfort." So stated Dr. P. J. Thomas, Director of Research, National Investments, Finance Department, in his broadcast talk last month from the Delhi Station of the All-India Radio. He spoke on "Small-scale Industries," in the series on post-war planning.

Dr. Thomas was formerly University Professor of Economics, Madras University. He was the Chairman of the Handloom Fact Finding Committee, which was appointed in 1941 to consider the question of the handloom industry in relation to the mill industry. The Committee submitted its report in 1942.

Dr. Thomas indicated five main causes as to why cottage industries should survive. They are: (1) We cannot afford to throw away the employment now given by the small industries to about 15 million persons; (2) we must pursue our industries, as far as possible, in such a manner as to occupy our plentiful labour supply and economize on capital; this will be possible only through giving an important place to cottage industries; (3) the scattered and decentralized character of our cottage industries has many military and tactical advantages; (4) the æsthetic claims of handicrafts are even more formidable; (5) on social grounds also, the survival of cottage industries is desirable.

Referring to the question of reorganization of cottage industries, Dr. Thomas said: "We have first of all to decide as to which of them should be fostered and for what kind of production. We have also to decide which should be allowed to use electric power. Having made these decisions, we have to take steps to safeguard these industries against machine competition, by marking out definite spheres and in other ways . . . In many cases, it would be possible to link cottage workers to the factory, as has been done in many European countries."

Cottage Industries: What Are They?

Dr. Thomas said:—What are they?

Small-scale industries in India are mostly carried on in cottages as handicrafts, and the great bulk of industrial production in this country is still of this category. Of the 15 million people returned as industrial workers in the 1931 census, more than 13 millions were engaged in such industries, and only about 1½ millions were employed in factories. The largest of the small-scale industries is handloom weaving, which gives full or part-time employment to about 6 million persons and supports nearly 10 million people. The cotton mill industry indeed looms much larger in the public eye, but it employs only one-tenth of that number. Next come various handicrafts working up metal, wood or stone, and others engaged in processing agricultural products or meeting the multifarious needs of the rural folk. Some produce artistic wares, while others make ordinary articles of consumption. Some are pursued by agriculturists as part-time occupation for supplementing their scanty earnings from tillage. But to most cottage workers, especially those in towns, these industries provide the sole means of livelihood. A more material difference perhaps is between those cottage workers who pursue their industry independently, purchasing raw materials and selling finished products, on their own account, and others who are depending on middlemen for raw material and for advances, and perhaps for sale also.

The total production coming from our small-scale industries is not so large as indicated by the numbers employed, but this is not the criterion by which their importance in the national economy is to be judged.

Causes of their Decay

Most of the cottage industries are in a state of decay. The production per worker has gone down and most of the workers are unemployed wholly or partly. In fact, the occupation given in the census returns is based on hereditary calling and does not give a true idea of the state of things. Large numbers who are returned as hand weavers get work only occasionally and are unemployed most of the time, with the result that several of the weaving centres have fallen on evil days. Not much better is the condition of other handicrafts, and some are worse off. Technological unemployment of the severest type is going on among the cottage workers all over India. But as they are quiet people living in out-of-the-way places, this fact is not widely known.

Why have cottage industries declined? In the case of industries producing ordinary consumption goods, at any rate, the chief cause of the decline is competition, not only from imports but from internal factory-made goods also. Spinning has suffered most by such competition, because not only are power spinning costs so low, but the machine can produce stronger and more uniform yarn than that made by the *charka*. This advantage is much less pronounced in the case of coarser yarns, essential for the thick coarse cloth required for wear in Northern India; in the Punjab, not less than 60 per cent. of the total yarn used is hand-made. Hand-weaving has also suffered, but the advantage of the power-loom is not so pronounced and in spite of heavy odds, between 25 and 30 per cent. of the total cotton textile production still comes from the handloom.

In the case of artistic products, however, the real cause of decline is not machine competition but the loss of patronage from the better-off classes in India, largely due to change of fashions. In the case of textiles, the *khaddar* movement has lately counteracted this tendency, but in spite of the active propaganda carried on by the All-India Spinners' Association, the total production of hand-spun yarn under its auspices came to only 3 million pounds in 1940. This is not very impressive, seeing that the total consumption of mill yarn in India is about 1,300 million pounds. Nor is the proportion of genuine *khaddar* cloth worn in the country considerable. The rough hand-made cloth common in North India cannot be included in this category.

Should They Survive ?

Thus, cottage industries are in decay, and if special efforts are not made, they may die out, as has happened in most other countries. Should this be allowed to happen? This is a crucial question for us to consider, especially now when reconstruction is thick in the air.

1. First and foremost, there is the question of employment, which is most important for a country like India with a large unemployed population. Cotton mills have come to supply more than 60 per cent. of the cotton textiles required for consumption in this country; while this has given employment to 600,000 persons, unemployment and misery have been the result to the six million persons engaged in the hand-weaving industry. There has been an expectation that industrialization would relieve the pressure on land, but this has not materialized. The fact is that modern machine-driven industries need only a comparatively small labour force. India produced even before the war a good part of our consumption goods; yet the total number of labourers employed in the factories came to only 1½ millions. We are now proposing to strengthen our basic industries. No doubt, these industries are essential for our economic improvement; even our very security depends on them. But they cannot be counted on for giving employment. The whole of our basic industries may not require many more than 100,000 labourers for some time to come. India needs large quantities of fertilizers, but all this can be made by employing about 2,000 workers. This is disconcerting for a country like India, where very large numbers are unemployed or underemployed. Even the industrial countries in the West producing vastly for export, depend largely on trade, transport and other services for employment. But in India these are undeveloped. Therefore, we cannot afford to throw away the employment which is now given by the small industries to about 15 million persons.

2. The paucity of our capital resources is also another reason for giving an important place to cottage industries. Machine-driven industries require large investments of capital, but our capital supply is meagre. In Western countries, where labourers are few and capital resources large, machine-driven industries cannot give such trouble, but our position is just the reverse. We have abundant labour and meagre capital. Therefore, we must pursue our industries, as far as possible, in such a manner as to occupy our plentiful labour supply and economize on capital. Hence the special need for small-scale industries in India.

3. The scattered and decentralized character of our cottage industries has many military and tactical advantages, which have lately become patent, especially in the case of China. Such production alone can defy modern warfare. The enemy can destroy concentrated power-driven industry by bombing, but not a decentralized industry like hand-weaving. It was this advantage that enabled China to defy Japan for long, in spite of odds. In a world subject to periodical outbreaks of intense and prolonged war, each area must have its food, clothing and other essential requirements from nearby, to avoid risks. The help which cottage industries could give in this matter must be fully utilized, in the interests of security.

4. The æsthetic claims of handicrafts are even more formidable. No doubt, owing to prolonged neglect, the artistic standards of some of them have fallen, but even now work of high quality is going on. Three years ago, I had occasion to make an all-India survey of hand weaving and I was amazed at the high artistic beauty of the superb *saris* made in many places. The *sari* is perhaps the most befitting garment for a woman, and the best is made on the handloom. The handicraftsman, once the pride of India, may still come into his own.

5. On social grounds also, the survival of cottage industries is desirable. They can avoid the overcrowding, regimentation, strikes and lock-outs which industrialism leads to, and can enable the worker to lead a calm and independent life in the midst of his family.

Their Inefficiency

Thus the preservation of cottage industries is desirable on many grounds. What stands in the way is their high cost of production and the consequent inability to compete with machine-made goods. In other words, handicrafts are inefficient. But the inefficiency is not so great in all cases. The handloom, at any rate, is able to closely compete with the power-loom in many classes of goods, and even in the case of certain staple goods the difference between mill and handloom prices is only about 10 per cent. Of course, this is only possible by depressing the hand-weaver's earnings. This is how the handloom survives.

Use of Cheap Power Desirable ?

Cottage production can be made much more efficient by the use of electricity, as has been done in many European countries and in Japan. In this way, many consumption goods industries can be successfully pursued on the small scale in cottages or in small workshops. Advancing on this line, small-scale industry can be made to compete successfully with factory industries. But such small-scale industries will hasten the decay of handicrafts and will lead to greater unemployment among cottage workers. This has already happened in the case of weaving: the single power-looms and small power-loom establishments in Bombay Province have seriously affected the handloom markets. Thus the introduction of cheap power into the cottage sphere has created another menace to employment in handicrafts.

Small Industries as Means to Fuller Employment

The Bombay Plan has made a special plea for fostering small industries as a means of affording employment, but how this objective will be carried out has not been explained. Unless the small industries stick to inefficient methods, the numbers now engaged in them are largely superfluous. Even as there is pressure of population on the land, there are to-day too many workers depending on cottage industries. In both cases, the use of cheap power will lead to serious unemployment, unless in the meantime special steps are taken to step up consumption, and this crucial point has so far escaped the attention of our planners.

Reorganization

The question of small industries, therefore, calls for urgent solution. We have first of all to decide as to which of them should be fostered and for what kind of production. We have also to decide which should be allowed to use electric power. Having made these decisions, we have to take steps to safeguard these industries against machine competition, by marking out definite spheres and in other ways. In general, it may be best for cottage industries to stick to products which call for variety and distinctiveness, rather than range over ordinary consumption goods, for which mass production methods have a clear advantage. In many cases, it would be possible to link cottage workers to the factory, as has been done in many European countries. Under this system, the factory will give partially prepared materials to cottage workers to be returned as finished products; or handicraft products will be finished in the machine, so that they may become more attractive. In such a system, it is possible for handicrafts to specialize and attain high levels of efficiency, but this calls for great technical skill in the cottage worker, and special training will have to be given to him.

The weakness of cottage workers to-day is largely due to the high cost of raw material and the poor marketing methods followed by them. The State may do a great deal, either on co-operative lines or otherwise, for supplying raw material at reasonable prices and for the orderly marketing of goods. Improved methods must also be demonstrated to him. A reorganized village economy on a co-operative basis will be able to place cottage industries on more stable foundations. Along with these, all-India organizations for marketing cottage products both here and abroad are essential. The country will, therefore, welcome the formation of an All-India Handloom Board, on the lines suggested by the Fact-Finding Committee.

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Workmen's Compensation Act, 1923

Disobedience, if not Wilful, is not a Bar for Compensation

IN a case before the Commissioner for Workmen's Compensation in U.P., compensation was claimed in respect of the loss of the right arm of a worker, which had to be amputated above the elbow. The question was whether the injury was caused by *wilful* disobedience of the rule forbidding cleaning of machinery while in motion. It was proved that such a rule existed. The employer's case was that the worker who was a finisher feeder in the carding section was caught up in the geared machinery when cleaning the back of the machine. The worker contended that the machine was switched off and it had stopped before he began to clean it; but it started accidentally due to loose switch buttons. The Commissioner examined the machine and the button switches appeared to him in order. He also tried the machine and found that when it was switched off the gears continued to rotate for a considerable time. It was not apparent whether the machine had been switched off or not and to the casual eye it was not very obvious whether the machine was in motion. The Commissioner accordingly held that the workman had cleaned the machinery while in motion. But the words of section 3 (1) proviso (*b*) (*ii*) of the Workmen's Compensation Act referred to *wilful* disobedience and the Commissioner held that disobedience in the case under reference was *not* wilful. The workman was not a pieceworker but was working on a time basis and had nothing to gain by keeping his machine going longer than he should have. Compensation was, therefore, considered payable to the workman and awarded according to the provisions of the Workmen's Compensation Act. —*Labour Gazette.*

"Satyanarayan Pooja" in the India United Mills Ltd., Bombay

Mill Directors Take Part in the Ceremony

Mr. U. Mishra, Acting Manager, No. 2 and 3 Mills, addressing the gathering.

"*SATYA Narayan Pooja*" was celebrated on the 27th May 1945 in the premises of the India United Mills Ltd., No. 1 Mill, No. 2 Mill and No. 3 Mill, in specially erected huge *shamianas*, with great enthusiasm by the millworkers, head jobbers, jobbers and assistant jobbers of different sections taking a leading part in it. The workers in all the three mills subscribed of their own free will a handsome amount of nearly Rs. 4,000.

The *Pooja* started at the scheduled time and lasted for about two hours, in orthodox Hindu style. Besides the mill workers, labourers from the neighbouring chawls flocked in large numbers to witness the function. Songs particularly composed for the occasion, speeches in Marathi eulogizing the Directors and Management and religious discourses from the *Gita* were features that added to the gaiety of the occasion.

A general view of the gathering.

In the evening the Directors of the mills, Messrs. Radhakrishna S. Khaitan, Ramkumar Poddar and M. R. Morarka, accompanied by Messrs. Matadin Khaitan (who is shortly going to U. K. and America) and Debi Prasad Poddar, the General Manager Mr. B. G. Davy, the Labour Officer Mr. Kanji Dwarkadas and the Directors' Secretary and Public Relations Officer, Mr. R. S. Ayyar, visited the place. In addition, Mr. C. Powell, Manager of No. 1 Mill, accompanied the party to Nos. 2 and 3 Mills and the Deputy Manager of the latter, Mr. U. Mishra, accompanied the party to No. 1 Mill. They were all lustily cheered on arrival and departure and the extemporé speeches delivered by Mr. Radhakrishna S. Khaitan in all the three mills were warmly applauded by the audience. The management announced a handsome donation to the *Pooja* Committee for expenses. Mr. Matadin Khaitan and his Secretary received an ovation from the tiny tots assembled.

Sitting from left to right:—Messrs. G. S. Patwardhan; J. V. Naik; J. C. Mazumdar; S. S. D. Corley; Kanji Dwarkadas; Seth Deviprasad Poddar; Seth Ramkumar Poddar; Master Khaitan; Seth R. S. Khaitan; Seth M. R. Morarka; Seth M. H. Khaitan; Messrs. B. G. Davy; U. Mishra; R. S. Ayyar and A. N. Other.

The Lyallpur Cotton Mills, Lyallpur

Workers' Annual "Mela"

BY G. D. SURI, M.A.

ONE of the many credits, which the Delhi Cloth and General Mills Co., Ltd., Delhi, can claim, is the welfare activities among its workers. The rapid progress that it has made in this direction has not only made its position noticeable among the other industrial concerns of the country but it has also won the appreciation of the public in general. It will not be out of place to mention that the Delhi Cloth Mills has the distinct privilege of being one of the pioneer concerns in India in undertaking the labour welfare movements and has given an impetus to other concerns. There is a regular flow of these activities which are directed in the various directions such as financial benefits, education, health, recreation and entertainments, sports and physical culture and general amenities.

The Lyallpur Cotton Mills, Lyallpur, which is a branch of the Delhi Cloth and General Mills Co., Ltd., Delhi, is not only closely following the footsteps of its mother concern in all the activities of welfare work, but in fact has gone a step forward in organizing an annual *mela* for the second year. The *mela* consisted of bazaar, amusement park, exhibition, lucky stalls and other equipment of entertainment. On this occasion the workers were given free *mela* coupons which enabled them to enjoy the function in a more befitting manner. The *mela* was open to the public, and a large number of distinguished visitors had come to visit the function. The Hon'ble S. Baldev Singh, Development Minister, Punjab Government, was the chief guest of the day.

The *mela* was formally opened by Sir Shri Ram, the Managing Director of the Delhi Cloth and General Mills Co., Ltd., Delhi, after prayers were offered. The *mela* lasted for two days.

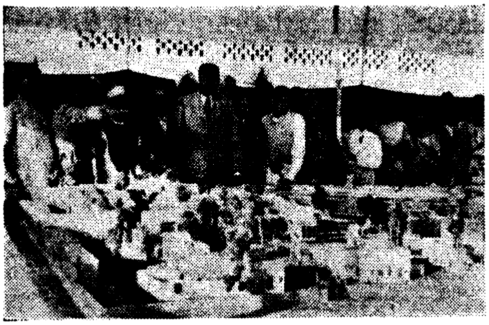
Sir Shri Ram, Managing Director of the Delhi Cloth and General Mills Co., Ltd., Delhi, is making a speech when he announced the enhancement of wages.

The *mela* absorbed the playgrounds which were divided into two tastefully decorated enclosures. The one was covered with shops and stalls of different kinds while the other was converted into beautiful amusement park. The latter provided a number of feats displayed by an expert *yogi* and a clever conjurer. The lucky stalls attracted the biggest rush of workers and proved to be a great source of entertainment. The more lively workers had the greatest thrills on the revolving disc and "roundabouts." Another attraction was the display of hand-woven articles, knitting and paintings of the women folk of the workers and also the products of the mills. Besides the model of the L. C. Mills with its residential bungalows and labour lines was the centre of interest for the visitors. It was a beautiful bird's-eye view of the complete layout of the mills premises.

One of the principal events of the *mela* was the organization of the "Mushaira" where poets of the country of wide repute recited their poems. It was a great success and was an effective source to develop the literary taste of the workers.

There was a proper arrangement of loudspeakers which were installed at different suitable and convenient places. Besides the various announcement regarding the *mela* programme the workers were provided with light music and short plays.

Last but not the least the dramatic club also afforded an occasion of entertainment when it presented "Humayon" on its well equipped stage. The play reflected a vivid picture of communal harmony to the poorly lettered workers. The drama which was witnessed by workers and the *elite* of the town was highly appreciated. Sir Shri Ram, Managing Director of the company, was highly pleased with the standard of the play and presented a handsome reward to the outstanding actors.



Mr. A. I. Khan, General Manager, and distinguished visitors and workers are examining the mills model.

The long string of entertainment was brought to a successful conclusion when prizes were awarded to workers in appreciation of their work done in various walks of life. This list is comprised of a number of prizes for items such as highest efficiency, maximum attendance, cleanliness in department, individual machine cleanliness of the workers, residential quarters, organ reader, workers exhibition best actor, regular bank depositor in the Trust Bank, maximum issue of library books and regular library attendance. The prizes which consisted of cash and certificates of merit were given away by the Hon'ble S. Baldev Singh, Development Minister, Punjab Government, in the presence of a huge gathering of workers and distinguished guests.

On that occasion, the Assistant Managing Director, L. Murli Dhar, eldest son of Sir Shri Ram, Managing Director of the Company, made an elaborate speech in which he fully dealt with the multifarious welfare activities in the mills. He was followed by Mr. A. I. Khan, General Manager, who congratulated the workers for their devotion to the mutual interest of the labour and the capitalists. Sir Shri Ram was presented with a welcome address by the Workmen's Union to which he made a very suitable reply. He also announced the enhancement of wages of the workers.

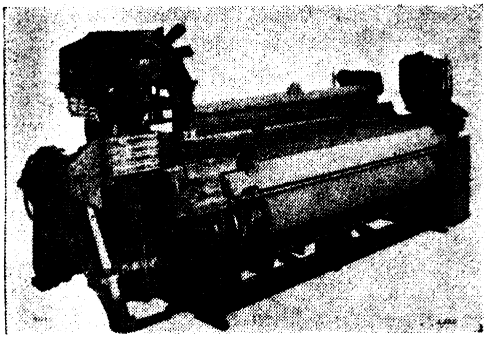
The function concluded with a closing speech from the chair, wherein Hon'ble S. Baldev Singh congratulated the workers for having their smooth relation with the mills management. He also congratulated Sir Shri Ram who is a torch-bearer to the workers.

The Hon'ble S. Baldev Singh (garlanded), Development Minister, Punjab Government, is having a round of the *mela* accompanied by Sir Shri Ram, Mr. A. I. Khan and the workers.

Novel Ideas in Swiss Textile Machines

Ruti Textile Machinery Works, Switzerland

THE firm of " Ateliers de Construction Ruti " was founded in the year 1842 and has since developed into one of the most prominent oom works on the Continent of Europe. They are building a large variety of weaving machines, of which a few types are described here in detail.



Ruti Multishuttle Automatic Loom with dobby, with instantaneous stopping and reverse motion, operated by the starting handle for pick-finding.

For weaving plain cloth of light or medium weight, the ordinary loom with loose reed has proved to be simplest in operation and of relatively high efficiency.

However, modern automatic looms were generally supplied with fast reed. The various accessory devices fitted on either side of the cloth on automatic looms, are liable to be damaged if the shuttle does not reach its regular position, and this may have been the cause for adhering to the fast reed type. This inconvenience, the makers claim, has been eliminated by a special patented device, which stops the loom before beating-up takes place, if the shuttle fails to return to the correct position. Thus, injurious shuttle smashes are avoided.

Due to this new device, loose reed automatic looms, which offer many advantages, are now available. This loom is furnished with outer scissors, cutting the weft of the run-out pirn just near the threadler, thereby eliminating drawn-in ends. This device is very valuable when weaving coarse counts. For weaving heavy cloth, the back rest roller, which is supported by springs, is fixed for the beating-up moment by a special device thus allowing more picks per inch, without unduly tensioning the warp. When the warp or weft end breaks, the loom is stopped in its respective best position for mending the breakage and the weaver can see at a glance which thread is broken, and need not turn the loom by hand. A starting and stopping device can be fitted, for control also from the back of the loom.

This low-built loom, without superstructure, with the novel type of suspension, facilitates the work of the tackler and weaver very considerably, and improves lighting conditions in the weaving shed. Replacement of shafts can be made with ease and rapidly, no adjustments of shafts being necessary. The use of straps and cords is completely eliminated.

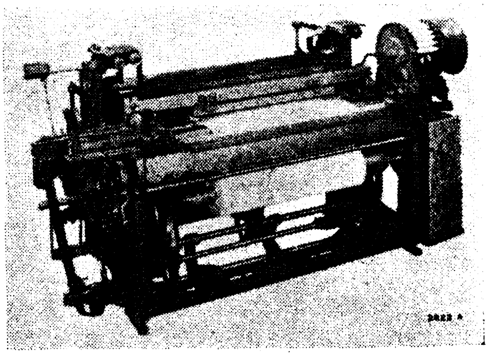
The following example, which is chosen at random, proves better than anything, the usefulness of these modern looms: in a weaving shed of 960 looms, 18 operatives run 54 looms each, and six tacklers look after 160 looms each. The latter figure proves how greatly the tacklers work is reduced. The looms are running at a speed of 190 r.p.m. with an efficiency of about 92-93 per cent. It is understood that such performances demand good yarn and first-class preparation of the warp and weft. The filling of the magazines is done by auxiliary labour, at a rate of 30-60 looms per filler, depending on the weft counts. All the warps are knotted on the looms by machine knotters ; therefore no special labour is required ; special spare weavers start up weaving of new warps. The entire staff—auxiliary labour included—is 52. The supply of weft pirns, removal of empty pirns and cloth are done by means of specially designed top rail conveyors.

Preparation Machinery

The beam warping machine of the high speed type, as well as the sectional cone warping machine have lately been greatly improved. Both types are high speed machines of modern design.

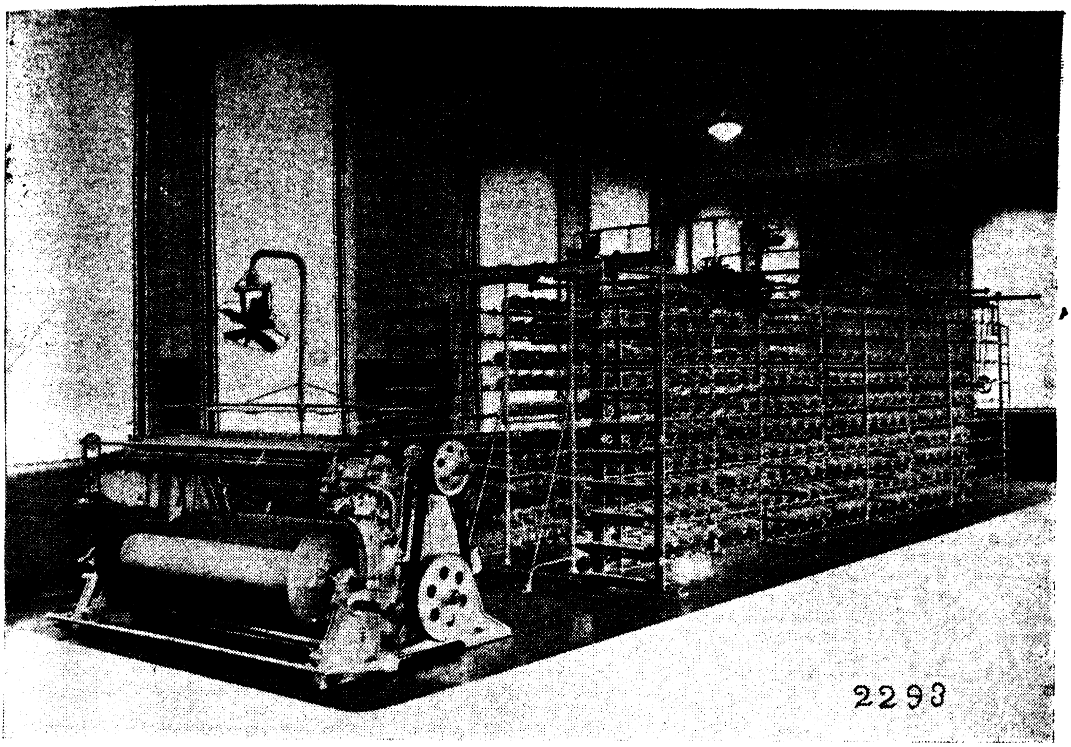
High Speed Beam Warping Machine

Contrary to the common practice, the beam of this machine runs in *fixed* bearings, thereby avoiding jumping of the beam, and producing perfectly round beams. The pressing drum moves backwards as the beam fills, and the operative is in no way hindered in his work. The machine is furnished with a falling roller which permits reversing of the warp beam, for finding the broken end in the right coil, thus avoiding difficulties during sizing.



Ruti High Speed Automatic Cotton Loom

The reversing motion of the beam is electrically operated. The doffing of the beam is done by means of a crank handle over a worm gear, which facilitates the work of the operative considerably.



Ruti High Speed Warper with Ordinary Creel

Soft beams for beam dyeing are warped by applying direct drive to the beam.

Cone Warping Machine

This machine is newly designed, on the basis of long experience, and is capable of meeting all requirements. The reel with a circumference of 4.4 yards, totally enclosed, is made entirely of metal. The speed is variable and can be adjusted by means of a hand wheel in a ratio of 1 : 15. The maximum speed is 650 yards per minute. The same speed is maintained throughout the entire operation, and the tension can be regulated according to yarn quality. The tensioning device is designed for the heaviest types of warps. A device for removing the finished beam mechanically is provided, for loading even the heaviest beams from the machine to a truck or runner.

Creels

The following types of creels can work in combination with warping headstocks described above : The magazine cone creel, the creel with reverse cones, the ordinary cone creel.

The magazine type creel is built for continuous operation without interruption. In the case of the creel with reserve cones, the portion of the creel supporting the reserve cones has to be turned, when the working cones are empty, in order to bring the reserve cones into working position. The yarn tension is regulated by means of steel discs (nickel-plated) centrally adjustable from one point at each side of the creel. The electric stop motion for warp breakages works with mercury contacts and red light signals to every row of thread guides are provided. The mercury contacts cannot be covered by fly or dust, and are very reliable.

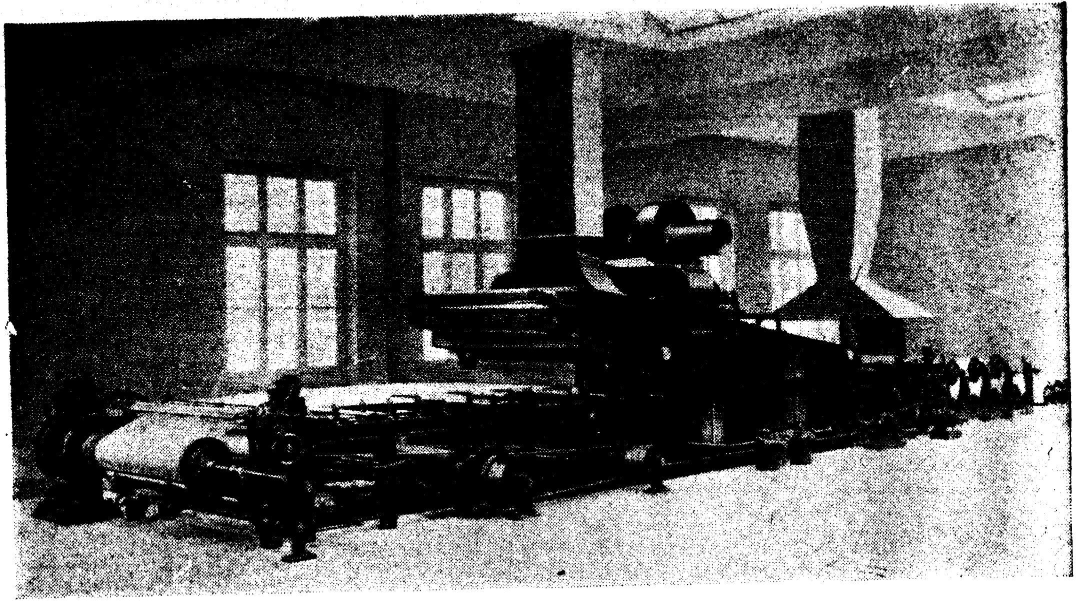
The creel for silk and rayon embodies a new principle, inasmuch as threads, unwound from cylindrical or conical cheeses, pass through hollow spindles. By this means production is raised enormously, as untwisted or lightly twisted yarn can be warped at much higher speeds.

Hot Air Drying and Sizing Machine

This machine is characterized by : (1) Good distribution of hot air between different layers; (2) correct mixture between fresh hot air and part of moist hot air; (3) circulation of air, which contributes toward better drying effect; (4) precise dosing of moist air at outlet, controlled automatically by a hygrometer.

One great advantage embodied in this construction is the fact, that the length of warp in the drying chamber can be varied, in accordance with particular requirements, depending on warp setting and type of material. The variation is effected by means of a hand wheel. By turning it, the length is either shortened or lengthened. Another device prevents the warp from sticking to the guide rollers, when the machine is stopped.

To avoid excessive drag on the warp in its wet and dry state an automatic equalization



Ruti High-Speed Hot Air Sizing Machine

device is provided.

The slasher sizing machine is of the standard type and is most reliable.

Hot Air Sizing Machine for Rayon and Silk

Instead of with drums, this machine is fitted with movable differential reels, which allow circulation of the hot air all round the threads. When the machine is stopped the reels rotate in the reverse direction, thus contact marks on the warp are avoided.

The firm of Ruti are represented in India by **Volkart Bros., Graham Road, Ballard Estate, Bombay,** who will gladly furnish further particulars about these machines to those interested.

Government Silk Weaving Factory, Mysore

MYSORE'S reputation as one of the oldest silk centres of the world is a well recognized fact. The manufacture of finished goods with silk has now steadily progressed from pit looms to power looms and onward to the weaving of intricate patterns of specialized goods. In respect of the last, Mysore took a definite step forward by the manufacture, for the first time in India, of georgette, satin, crepe-de-chine, laced *saris*, etc., at the Government Weaving Factory established in the year 1931.

Primarily, the Silk Weaving Factory at Mysore was started by the Government in order to show and establish the utility of Mysore silk in the manufacture of high grade silk fabrics. The factory is a demonstration unit under the guidance of a textile expert who has had his training in Europe. The establishment of this factory has resulted in creating a market for the indigenous Mysore silk and in improving the indigenous method of reeling. The factory has also demonstrated to the public the value of maintaining quality. Besides, it serves as a model concern in all respects, such as sanitation, equipment, labour, etc., for those who desire to start factories of this type.

As stated before, the factory is manufacturing several kinds of high class fabrics out of pure Mysore silk, like georgette, crepe-de-chine, georgette and crepe *saris* with or without borders, interlaced fabrics, suitings, etc. Different kinds of ties and handkerchiefs are also being manufactured. All these fabrics are made in a great variety of lovely shades. The factory has recently expanded its production by installing additional looms and machinery. The weaving of lace *sari* borders, screen printing of silk fabrics, and the manufacture of dyed silk cords for hemming and upholstery, etc., are new lines of work developed at the factory. Another characteristic is that they appear quite new when washed and ironed. These fabrics have won appreciation.

The production of silk fabrics for civilian market has been substantially reduced as a war-time necessity. When peace returns, the factory will resume the manufacture of its normal products and cater for the requirements of its numerous customers all over India in an increasing measure. It is to the credit of the factory that it is the pioneer in the production of parachute components and has been making large supplies thereof to the Supply Department of the Government of India for defence requirements.

The factory is supplying considerable quantities of parachute cloth and silk cord of the specifications mentioned by the Supply Department. The quantities of orders already executed and being executed are as follows :—Parachute cloth, 2,14,000 yards; sewing thread, 7,07,89,131 yards; and cordage 8,04,977 yards.

Mysore Board of Sericulture

Suggestion to Send Silk Trade Delegation to Foreign Countries

A MEETING of the Board of Sericulture was held on the 17th April 1945 in Bangalore with Mr. M. A. Sreenivasan, Minister for Food and Civil Supplies, presiding.

The Board noted with satisfaction that some of the comprehensive proposals involving an expenditure of about Rs. 14 lakhs made by the Programme Committee of the Board for the development of the industry in the State at present and in the post-war period were already under the consideration of Government. The proposals included:

(*a*) the starting of 12 mulberry nurseries in several parts of the State,

(*b*) the opening of depots to be attached to the existing farms for stocking and selling manure required by sericulturists,

(*c*) the opening of two new hill stations for rearing foreign race seeds,

(*d*) the starting of 180 additional grainages for improving supply of disease-free layings,

(*e*) starting four fully equipped cocoon markets with provision for store-room, stifling chambers, etc.,

(*f*) establishing an up-to-date silk conditioning and testing house which was already completed,

(*g*) opening of a central training school at a cost of Rs. 2 lakhs for imparting higher technical training, plant breeding, silk-worm breeding, the chemistry of sericulture, silk reeling and sericultural textiles, and

(*h*) the opening of a research institute in Channapatna at a cost of about Rs. 3 lakhs.

The Board considered the recommendations of the Sericulture Co-operation Committee for the organization of a network of 35 co-operative societies involving an expenditure of about Rs. 2 lakhs for distributing seed, *chandrikes* and other implements required by cocoon rearers and rendering such other assistance as may be required by them.

The revival of the once prevalent system of *chawki* rearing (i.e., a system for rearing the worms up to a certain stage during which expert supervision was required under the care of trained people) was considered as very desirable.

The Board considered that a trade delegation should be sent to foreign countries such as the U.S.A., Australia, etc., in order to put superior quality Mysore silk on high price world markets. Emphasis was, however, laid by the Board that manufactured goods should be exported rather than raw silk as this would help the weaving industry in addition to the sericulture industry.

The steps taken and under consideration for eliminating black markets in cocoons and silk were explained. Arrangements were made for (*a*) distributing the bonus due to cocoon rearers and reelers promptly and for the clearance of arrears; (*b*) examining the question of controlling prices of silk yarn and fabrics; and (*c*) appointment of additional special police staff.

The proposed procurement scheme under which the entire production of cocoons reared in the State would be secured was also considered in this connection and the Board unanimously welcomed the introduction of the scheme.

Australian Timbers Found Suitable for Textile Rollers

UNTIL recent years, the Australian textile industry obtained almost all its requirements for wooden pressing rollers from overseas sources —American rock maple being considered the timber best suited for spinning and drawing frame rollers.

In recent years, however, lack of shipping space in the Pacific Area seriously curtailed the quantity of rock maple that could be imported, and with the textile industry in Australia working at a much increased *tempo*, it soon became apparent that, unless an Australian substitute for the imported timber could be found, serious consequences might ensue. Investigations were begun into the possible use of Australian timber species—the principal requirements of a suitable timber being:—(*a*) uniform texture and medium density to give even wear free from fraying or raised grain; (*b*) freedom from tendency to chip or split; and (*c*) ability to provide a surface which would grip textile fibres sufficiently to draw them forward under pressure, and yet remain free from any tendency to " lick up " the fibres on to the roller.

To date some eleven Australian species, comprising white beech; red ironbark; Queensland maple; myrtle beech; yellow gum; greybox; celery top pine; rose mahogany; saffronheart; crow's ash and high density silver ash have been tested. Several of these have given very promising results, namely, high density silver ash; saffronheart and grey box, and together with high density compregnated wood (compressed and resin bonded) and can now be recommended for use.

Some Bombay Social Functions

Party to Meet Mr. S. D. Chard, Additional Textile Commissioner

To congratulate Mr. S. D. Chard, Additional Textile Commissioner, Government of India, Mr. Radhakrishna S. Khaitan, a well-known industrialist of Bombay, gave a luncheon party on the 18th June 1945 in the Taj Mahal Hotel. The function was well attended and the gathering was a representative one, comprising among others prominent persons like Sir Victor Sassoon, Bart., Mr. M. K. Vellodi, C.I.E., I.C.S., Sir Francis Low, Editor, *Times of India*, Sir William Lamond, Managing Director, Imperial Bank of India, the Hon'ble Mr. R. H. Parker, Mr. C. C. Desai, C.I.E., I.C.S., Mr. J. C. Setalvad, Mr. Ramnath Podar, Mr. M. A. Master, Mr. Pranlal Devkaran Nanjee, Raja Narain Lal Pittie, Mr. W. B. Bryden, Mr. H. G. H. Everitt, Mr. S. W. Shiveshwarkar, I.C.S., Mr. M. P. Kanga, Director of Industries, and Mr. M. G. Iyer and Mr. R. K. Murthy, Traffic Managers of G. I. P. Railway.

On this occasion Mr. Radhakrishna Khaitan delivered a short speech eulogizing the services rendered by Mr. Chard in the last war and the services rendered by him to the industry as well as to the Government of India, in the course of which he said:—

"Mr. Chard came to India in 1919 after distinguishing himself as a Flying Officer in the Royal Air Force and joined Messrs. Langley & Co., one of the leading European cotton firms in Bombay, with which he was connected until 1939, when the firm was voluntarily wound up. He then joined Messrs. Volkart Bros. which firm he latterly represented in Delhi as their Liaison Officer with the Central Government on all questions of control. In November 1942 Government could not resist the temptation of taking over his services as Executive Officer of the Cotton Movements Panel. With characteristic zeal, Mr. Chard rationalized the entire movement of cotton in India by rail, thereby enabling mills to get their requirements of raw material without any hitch and simultaneously saving precious wagon space which was then in great scarcity. Six months later he became the Controller of Raw Materials and Stores. In April last, he went to Washington to represent India at the meeting of the International Cotton Advisory Committee jointly with Mr. H. K. Kirpalani, I.C.S., Indian Trade Commissioner in New York. Earlier in the year, he paid a flying visit to the U.S.A. and the U.K. at the instance of the Government of India to study the cotton situation in those countries and find out the scope for the revival of our country's cotton exports which have considerably deteriorated.

From left to right.—Messrs. R. S. Ayyar, Makanlal Seksaria, R. S. Khaitan, R. K. Moorthy, S. D. Chard.

"I should be failing in my duty if I do not refer on this occasion to Mr. Chard's outstanding achievement as Controller of Raw Materials and Stores, which has been the formulation and execution of the Government's control over raw cotton trade which broke the inflationary boom that began some time in March 1943.

GUESTS AT LUNCHEON

Top row, from right to left.—Mr. M. K. Vellodi, C.I.E., I.C.S.; Sir Victor Sassoon, Bart., Mr. R. S. Khaitan, Mr. S. D. Chard, Sir William Lamond and the Hon'ble Mr. R. H. Parker.

Bottom Row, from left.—Mr. C. C. Desai, C.I.E., I.C.S., Mr. Pranlal Devkaran Nanjee, and Mr. M. A. Master.

" Ready-witted and amiable and with charming manners, Mr. Chard will continue to win further laurels in 'the fresh fields and pastures new.' Mr. Chard has a high regard for the perspicacity of the Press. And since Mr. Chard and, I should add Mr. Vellodi too, appreciate constructive criticism, I may say one word more. One of the important roles which these two distinguished officers will have to play is in the task of giving a new orientation to official control and effecting not merely a smooth transition from war to peace-time economy but also ensuring economic expansion simultaneously. The war boom has obscured, but not altered the fact that the depression, which began with the stock market crash in 1929, was still present in 1939; and the war has postponed, but not necessarily solved, the problem of sound and lasting recovery. The progress of reconversion has already begun in England and America; and the public and the industry alike look to Mr. Chard and Mr. Vellodi to consider the question of switching over Indian industry to peace-time production and simultaneous economic expansion, lest other countries, notably Brazil, steal a march over India in the markets of the world."

Mr. Chard, replying to Mr. Khaitan, made a short humorous speech. He was sure Sir Francis Low would agree with him regarding the need for no more than a sparing use of adjectives. Service, he claimed; distinguished service, no. Mr. Chard was grateful to the Chairman for recalling his recent interview to a Press representative in the course of which he had said that he would be a human link between Government and industry. He would reiterate it and added that anyone connected with the industry and having any grievance whatsoever could always approach him. After making some humorous remarks, Mr. Chard thanked the Chairman for his kind words as well as his good wishes and of all those present.

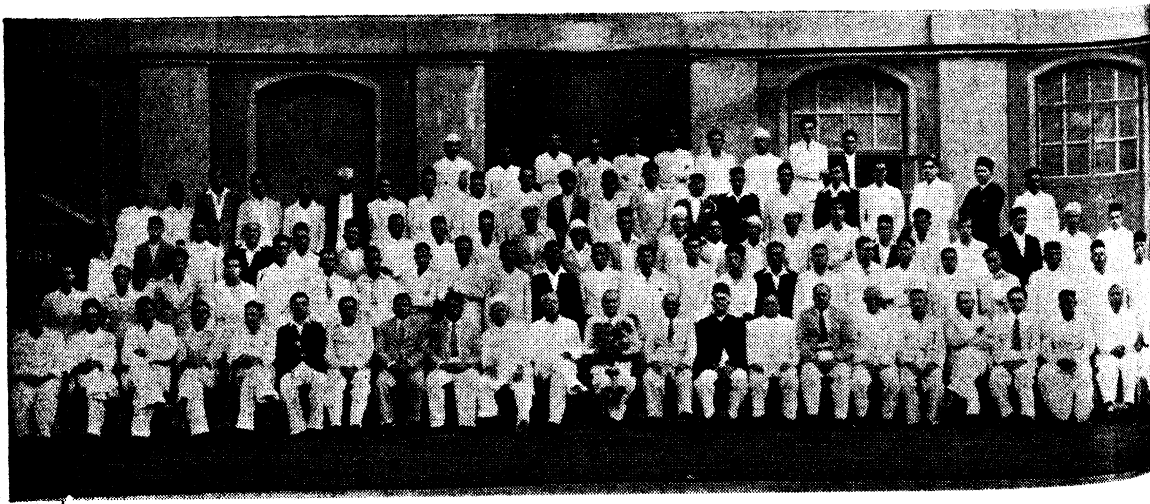
Mr. Radhakrishna S. Khaitan's Party to Mr. Nandulal Mehta

To congratulate Mr. Nandulal M. Mehta, B.A., LL.B., Manager, Morarjee Goculdas Mill, Bombay, on his appointment as Secretary, Post-war Planning Committee (Textiles) of the Central Government, Mr. Radhakrishna S. Khaitan, the well-known industrialist of Bombay, gave a dinner party on 22nd May 1945 in the picturesque grounds of Pransukhlal Mafatlal Swimming Pool at Chowpatty, Bombay. The function was well attended by a representative gathering.

In proposing the health of Mr. Mehta and wishing him every success in his new office, Mr. Radhakrishna Khaitan paid a well-deserved tribute to his guest's ceaseless contributions not only to the advancement of the Morarjee Mill but also to the cause of the textile industry as a whole in various channels during the last 27 years. Mr. Khaitan congratulated the Government on their wise choice for post-war planning in textiles of a brilliant officer with unique qualifications and experience and said that what was a loss to the Morarjee Mill was a distinct asset to the Government.

Mr. Nandulal Mehta, replying to the toast, thanked Mr. Radhakrishna Khaitan and all those assembled to honour him. He said that, whatever be the exact nature and scope of his authority, of which he had only a faint notion at the moment, he would continue to feel that he was still in the industry and would go on doing everything in his power to promote the well-being and advancement of the industry, whose interests would ever be foremost in his heart. He would not allow the occasion to slip by, Mr. Mehta continued, if he did not make a reference to the Morarjee Mill which after 27 years he was leaving with mixed feelings of regret and sorrow. He paid a glowing tribute to the Directors of the mill throughout its chequered course of vicissitudes and fortunes. In particular, Mr. Mehta congratulated Seth Tansukhrai M. Karundia, with whom the speaker had long and close association, on his untiring zeal and selfless devotion and his ceaseless efforts to lift the mill from the quagmire of financial despondency, which the Seth achieved with such phenomenal success, that the mill to-day presents a bright picture of contentment and prosperity. Mr. Mehta thanked also Mr. Radhakrishna Khaitan (who is also a Director of the Morarjee Mill) for his guidance and courtesy.

Before the function came to a close, Seth Tansukhrai Karundia spoke in Gujerathi



A group photograph of the officers and mill staff of the Morarjee Goculdas Mill with Mr. Nandulal Mehta seated in the middle, garlanded.

of his feelings of sorrow on having to part with Mr. Nandulal Mehta after both of them had worked together so long for the betterment of the mill. The success of the function is in no small measure due to the efforts of Mr. Khaitan's Public Relations Officer, Mr. R. S. Ayyar, who is shortly leaving for America.

Farewell Address to Mr. Nandulal M. Mehta by the Employees of the Morarjee Goculdas Mill, Bombay

On the eve of relinquishing the office of the Manager of the Morarjee Goculdas Mill, Bombay, to take up the appointment as Secretary, Post-war Planning Committee (Textiles), Government of India, Bombay, Mr. Nandulal M. Mehta, B.A., LL.B., was presented with an address on 25th May 1945 by the employees and operatives of the mill which he had served with credit for several years. Seth Pirmal Chathurbhuj, partner of the Managing Agents of the mill, presided on the occasion, and after unveiling Mr. Nandulal's portrait an address was presented to him.

The address briefly mentioned the great achievements and the outstanding and lasting services rendered by Mr. Mehta to the Morarjee Goculdas Mill during the past quarter of a century. The present financial position of the mill and its all-round development and progress were in no small measure due to his ability, sagacity and foresight. Since his becoming the Manager of this mill, he had introduced a new spirit of geniality and *camaraderie* amongst all the ranks of the employees.

He had always taken the initiative in starting new items of welfare work for the employees and had sponsored the starting of literacy classes for the benefit of workers and had taken interest in the affairs of the mill sports club. It was in his regime that the annual *Ganpati* festivals were commenced with evident success and popularity among operatives.

The address also mentioned his work as a member of the Labour and Technical Advisory Sub-Committee (Managers) of the Millowners' Association and the excellent work he had been doing as the Chairman of the Textile Association (India).

Millowners' Association Secretary's Party

Mr. N. S. V. Aiyar, Secretary, the Millowners' Association, Bombay, gave a party in honour of Mr. Nandulal M. Mehta at the Taj Mahal Hotel, Bombay, on 19th May when several prominent persons connected with the textile industry were present.

A view of the huge gathering of mill staff and men who assembled for the presentation of the farewell address.

Introduction of Cloth Rationing in Bombay

Experiment Closely Watched by Provinces

CLOTH rationing for the city of Bombay and its suburbs was introduced by the Bombay Government on the 3rd instant.

The Textile Commissioner, Mr. M. K. Vellodi, and the Provincial Textile Controller, Mr. J. K. Thakore, who have worked hard to give shape to the scheme, along with other officers, toured the city and suburban areas on the previous day to see for themselves the launching of the scheme. They visited a number of approved shops, the retailers of rationed cloth, beginning from Bhuleshwar and ending at Ghatkopar.

Though it was a general holiday many shops remained open because they did not want to miss the inaugural transactions. The shops were crowded by customers most of whom were able to get their requirements without any difficulty.

For the first time since the institution of cloth control, the public in Bombay City and the Bombay Suburban District was able to see the finer varieties of cloth displayed in the 337 shops approved by the Government for the sale of rationed supplies. People who had registered their cards soon after the announcement of the rationing scheme were also able to make their purchases of the rationed varieties. Others had the satisfaction that they would be able to get their requirements when their turn came.

Nearly 50 per cent. of the population in the rationed area has, it is understood, registered its cards for rationed cloth. The total demand of the city during the first six months ending November is expected to be 3,000,000 units, i.e., 22,500,000 yards of cloth. Out of this, the units registered so far number only 1,700,000. Those who have not so far registered their names, are expected to follow. Under the scheme, the Government hope to distribute about 6,000 bales of the rationed varieties of cloth every month.

Wide Variety of Cloth

All shops, irrespective of their class—A or B—appeared to be well stocked and displayed a wide variety of rationed cloth —*dhotis*, *saris*, mulls, voiles (including printed and processed), dorias, shirting and coating, including drills and duck. The *saris* were of the finest designs and some of them had not been available in the market for months. In shirting many varieties are available, including some for which people had been paying fancy rates in the black market. Coating materials are restricted to a few standard types.

Each of the 315 shops has been supplied ample stocks to last for five weeks on the basis of 36,000 units for " A " and 12,000 units for " B " class shops a month. This represents a total of 6,000 bales which is the monthly quota required for the rationing scheme.

Special arrangements have been made for the supply of cloth required for funerals through 47 authorized shops engaged in the trade of such cloth.

Interviewed by a representative of the Press, Mr. Vellodi said: " So far as I have seen all the varieties of rationed cloth have been supplied to the shops. My impression is that in quality too they will be found to be satisfactory. I have seen a number of people buying their ration of cloth and it was going on quite smoothly. Defects in the scheme, if any, can be known only when it gets going. Any complaints from the public, made at the various rationing offices, will be promptly attended to by the Provincial Textile Controller, Mr. J. K. Thakore."

Following the introduction of rationing in the city and the suburbs, stocks of rationed cloth with hawkers and non-approved dealers have been frozen.

It may be mentioned that shops selling rationed cloth will not be able to sell in cut pieces non-rationed cloth such as hand and power-loom woven cloth, and silk. These goods will be sold only through the non-approved shops. This is obviously a concession to the cloth traders and has been devised by the traders' associations.

How far this will be appreciated by the public remains to be seen, but there are misgivings that the cloth traders who have a bad record of profiteering and black market trading will take unfair advantage of this concession. But they will be closely watched and checked especially as there are sections of the people who use only hand-woven or power-loom-produced cloth.

The authorities have been hard at work to evolve a fool-proof scheme and have worked the new scheme on the basis of the grain-rationing.

The shopkeepers under the new arrangement have to maintain a large number of account books and any defaulter, among them, could be found out without difficulty. Among the books they have to maintain are: (1) Daily stock book, showing balance from previous day, stock received on permit, sale during day and balance. (2) Daily sale diary and statements showing the number of cloth ration cards and certificates of eligibility registered or cancelled during the month.

The first large-scale experiment in this line, the Bombay scheme will be watched with keen interest not only by the authorities here but also in other provinces. Its success will be followed by its extension to numerous other areas, possibly on a country-wide basis.

The city and suburbs have been experiencing a virtual cloth famine for the last several months and the present scheme is the culmination of well-planned and carefully laid out programmes with a view to ensuring an even and equitable distribution of cotton cloth of all varieties. Elaborate arrangements have been made by the authorities in furtherance of the scheme, and all going well and according to plan, the citizens are assured of a certain minimum though not a plentiful supply of cloth.

One noteworthy feature of the opening day's sales was the marked preference of people for fine and mercerized materials. At Ghatkopar, the centre of wealthy merchants, people demanded mercerized *dhotis* even on the ration card of women. There was a marked tendency on the part of buyers to go in for the better varieties regardless of higher prices

Cloth Rationing on the Screen

A film explaining the Bombay cloth rationing scheme was shown at city cinemas in the first week of this month. It explains in detail how the system works and how people must go about getting their cloth ration.

The English version of the picture was shown at the Metro, Regal, Eros, New Empire and Strand theatres. The Hindustani version was screened at the Roxy, Central, Minerva, West End and Krishna theatres.

Utility Cloth Production

In order to make the cloth rationing scheme a success, it is essential to raise the industry's output of cloth and the mills will be required to set apart 50 per cent. of their maximum capacity in all widths of looms from 48 to 58 inches for their production. The headlines of *dhotis* and *saris* will not hereafter be woven in more than one colour and the borders of *saris* will not be more than two inches wide, plain, dobby and jacquards and the denting will not be more than six in a dent.

Besides imposing restrictions on spinning up to a limited number of counts and earmarking 90 per cent. of the looms capacity of mills to the production of utility cloths, the mills are restricted to manufacture at one time not more than three sorts per 100 looms in a month and will not be allowed to change more than one sort per 100 looms per month. The scheme will be supervised by the panel members of the Textile Control Board in their respective areas.

The two main assumptions on which the scheme is based are adequate supply of fuel and of labour. The shortage of coal has been a constant source of anxiety during the past three years and the mills in Ahmedabad alone are stated to have suffered a loss of 48 million yards of cloth output during the first four months of the current year owing to coal shortage. Though the mills in Bombay have remained unaffected so far, it is understood that the Government of Bombay propose to declare one weekly holiday in addition to the usual holiday per week and other festival holidays in order to conserve electricity. Such a step will, it is feared, defeat the very object of the introduction of the scheme.

On the question of labour supply, it is pointed out that there has been acute shortage of skilled labour in the mill industry and some of the mills have consequently found themselves unable to run the plant on two shifts. Moreover, the percentage of absenteeism among textile workers has also increased abnormally during recent years.

Distribution of Yarn : Advisory Committee Set up in Bombay

The Government of Bombay have, it is understood, decided to constitute a committee to advise the Provincial Textile Controller on the distribution of yarn in the province. The Committee will consist of Mr. J. K. Thakore, Provincial Textile Controller (Chairman), Mr. M. P. Kanga, Director of Industries, four representatives of the yarn trade and four representatives of the handloom and power-loom industry in the province. The Committee will meet periodically to review the position in respect of yarn supplies. Similar committees have been already formed in the districts to advise the District Magistrates on questions relating to the allocation of yarn supplies to the weavers in the various talukas in the respective districts.

Complaints are being received in Bombay about inadequate supplies of yarn to the handloom and power-loom factories in the province. The Malegaon Muslim Chamber of Commerce and Industry has forwarded a representation to the Provincial Textile Controller emphasizing the need for overhauling the method of distribution. It has complained that the weaving industry at Malegaon has not been allotted its quota in proportion to its requirements, while some of the other centres have received more favourable treatment. On the other hand, the Youth Association, Malegaon, points out that the method of distribution through societies is not ideal.

Inquiries in official circles show that Bombay Province has been able to get hardly 50 per cent. of its monthly requirements of yarn. There does not appear to be any prospect of improvement in the supply position and the hardships can be minimized only by evolving improved methods of distribution. It is hoped that the constitution of the Yarn Advisory Committee will be of some help in this direction.

Popularity of Standard Cloth : Production to Continue

Over 1,000,000,000 yards of cloth have so far been distributed to the various provinces and States under the standard cloth scheme by the Government of India, since its inauguration 30 months ago. It is stated that the demand for such cloth continues and the varieties manufactured under the scheme are popular besides. The provinces and States are said to be anxious for the continuance of the scheme, and the Government of India are not likely to abandon it in the near future.

Since the scheme has been in operation, the mills have been asked to produce 1,127,944,000 yards of standard cloth, and according to the latest returns from the provinces and States, 745,000,000 yards of cloth have already been sold.

CLOTH RATIONING IN OTHER PLACES

Madras

It is announced that the Madras Government is not at present considering any scheme to introduce cloth rationing in the province.

Calcutta

Details of a rationing scheme for mill-made cloth in the Calcutta area are, it is learnt, being worked out by the textile authorities.

Under the Government's scheme of distribution each individual over the age of 12, it is reported, will receive two *dhotis* or two *saris* or seven yards of cloth each year. Meanwhile, the Government have selected 16 shops in various parts of the city for the distribution of cloth for emergency purposes such as marriages, funerals and other ceremonies.

A Central Civil Supplies Advisory Committee, consisting of 30 persons representing various political parties and interests, has been formed. Its principal function will be to advise the Government in respect of the needs of the public and also inform them of the public reaction to the Government's scheme of rationing.

Sind

The present cloth situation in Sind was considered at a meeting of the Council of Ministers on 22nd May, when it was decided to introduce cloth rationing immediately in certain areas of the province.

Under the plan, it is proposed to allow every person twelve yards of cloth per year. For working out further details of the scheme, the members of the Sind Price Control Advisory Committee were invited to meet the Premier on the 23rd May.

It is understood that the Government had decided to have 120 cloth ration shops in Karachi. At present, there are about 560 retail shops in the city.

Bihar

The Bihar Government introduced cloth rationing first in Patna City. They have now issued general instructions for the introduction of similar rationing schemes in all towns where food rationing exists on the same lines as in Patna.

In the rural areas also schemes for rationing available supplies of cloth through the chowkidari *panchayats* or similar agencies are being introduced or under consideration. All available cloth will be distributed strictly on a population basis in order to ensure a fair distribution between all sections of the population.

These facts were announced by Mr. Ansorage, Adviser to H. E. the Governor of Bihar, at a Press Conference held recently at the Secretariat.

Delhi

Twenty-four yards of cloth per head per annum is the quota aimed at for the proposed cloth rationing scheme in Delhi, which was explained at a Press Conference on 23rd May 1945 by Mr. R. K. Ramdhyani, Controller of Rationing.

Those who pay income-tax, rent or land revenue will be entitled to fine cloth. All persons over eight years of age can draw full quota. No special quota will be allowed to ladies.

Handloom cloth, imported cloth, handkerchiefs, napkins, tapestry and other categories of made-up cloth will be exempted from rationing. Woollen cloth also will not come under the rationing scheme.

Mr. Ramdhyani stated that the scheme will be put into operation initially for six months, during which period every individual will get 12 yards of cloth. Large supplies of imported cloth are expected to be available by that time. If the supplies are adequate, it is possible that cloth rationing might not be continued thereafter.

The Textile Commissioner had allotted 11,000 bales of cloth for Delhi on its population basis of 1941, which worked out at 27 yards per head per annum. But, since there has been a 50 per cent. increase in the population of Delhi during the last four years, the Textile Commissioner's allotment will give only 18 yards per head per annum. As, however, the authorities expect an improvement in the supply position after six months, it has been decided to fix the half-yearly quota at 12 yards per head, thus aiming at an annual quota of 24 yards per head.

It is proposed to issue ration cards to heads of families based on quarterly allocation of supplies. Fine cloth, which had been the cause of so many free fights in the bazaars, will be allowed to every buyer upto half of his total quota.

Two kinds of shops will be opened in the city, one dealing in plain cloth and the other in printed cloth.

Besides these, there will be some 30 to 40 shops providing other varieties of cloth.

OTHER CONTROL NEWS

Bengal Yarn Control Order

There is general dissatisfaction among *khaddar* cloth producers and sellers of Bengal against the inclusion of *khaddar* within the purview of the Bengal Cotton Cloth and Yarn Control Order by a recent notification.

It is felt in Congress circles that handspinning and *khaddar* production are two of the main constructive items of the Congress. Congress workers, who have taken up these are striving for increasing handspinning and *khaddar* production for over 25 years, to meet the demand of cloth and to train people to be self-reliant. They supply cotton and *charkas* to spinners and train them up to spin and pay labour charges. So in the process of *khaddar* production, *khadi* workers do not avail of any Government help. *Khaddar* business has no ill reputation of black-marketing. In these circumstances *khaddar* workers consider that there is no justification to bring *khaddar* cloth within the Control order.

It is learnt *khadi* organizations are shortly representing their grievances against the Control order to the Textile authorities with a view to getting exemption.

Silk Merchants' Protest

The Bombay Raw Silk Merchants' Association has wired to the Government of India protesting against their decision to arrange distribution of raw silk imported from China through the organization of merchants trading in cotton yarn instead of through its members who are directly connected with the trade.

The prices of artificial and pure silk fabrics are expected to drop sharply in the near future as substantial quantities of these goods will be put on the market. In the meantime, the silk trade in Bombay has agreed to reduce the prices for the existing stocks to the correct level regardless of losses. The prices will be approved by the Controller General of Civil Supplies and may be stamped on the silk cloth that will be sold hereafter.

Artificial Silk Prices Reduction Announced

The prices of artificial silk cloth manufactured in this country have been reduced. The supply position has also improved following the release of artificial silk yarn to the mills at controlled prices by the Government.

The retail selling prices of these fabrics are stamped at both ends at each yard length of the material and are much less than the ruling rates for similar fabrics in the market. Efforts are being made to reduce the prices further.

The Controller General of Civil Supplies has also approved the ceiling prices of all existing stocks of Indian-made artificial silk fabrics with the dealers. The maximum retail selling prices for the main varieties of unstamped existing stocks of artificial silk fabrics are:—Rs. 6 per yard for Dilki Pyas, Manki Pyas and Brocades, Rs. 6 for heavy linen for men's coating, Rs. 5-8 for thick satin, Rs. 4-14 for georgettes, crepe and ninon, Rs. 4 for shiozi (boski and taffeta) and Rs. 1-12 for voiles. These prices are for plain fabrics and a small addition will be made to them in the case of printed fabrics.

Knitting Wool Prices

The Central Government has revised the prices of certain brands of knitting wool by an amending notification published in the *Gazette of India* on 25th May. The revised maximum retail selling price to consumers are: Wendy wool plain 3 and 4 ply Rs. 14-8 per lb., Wendy wool plain sock Rs. 14-8 per lb., Clipper baby wool Rs. 14-8 per lb., and Wendy super botany wool Rs. 15 per lb.

Woollen Cumblies for Ceylon

A *communique* issued by the Ceylon Government Representative says: "On receipt of a communication from the Government of Ceylon that export to Ceylon of woollen *cumblies* was prohibited by the Indian Government and that Ceylon was badly in need of these before the south-west monsoon rains started, the special representatives of the Government of Ceylon took the matter up with the Commonwealth Relations Department of India. It was pressed on the Government of India that, if woollen *cumblies* were not made available, work on up-country tea estates would be adversely affected and production of tea, a war essential, would suffer. The Government of India viewed the mattter with great sympathy and ordered the release of

40,000 woollen *cumblies* immediately and a release of a further 40,000 has also since been sanctioned, making a total of 80,000 woollen *cumblies* for this year.

"The Ceylon Representative acknowledges with gratitude the sympathetic consideration given by the Government of India to his representations and the promptitude with which action was taken."

Machinery and Spare Parts for Woollen Industry

For purposes of import of machinery and spare parts, the cotton and woollen textile industries in India have hitherto been treated as one composite unit, a combined shipping provision to cover their requirements being made by the Mill Store Priority Assistance Committee under the Textile Commissioner, Bombay. It has, however, now been decided to treat the woollen industry as a separate entity for this purpose and a separate provision has accordingly been made to meet the woollen industry's requirements.

With effect from 1st June 1945, therefore, all applications for machinery, spare parts and mill-stores for the woollen textile industry should be submitted to the Supply Department (Directorate General of Supply, I. & E. C. Branch), New Delhi, who will then forward these with their recommendations, to the Deputy Chief Controller of Imports, Bombay, who is the licensing authority.

Umbrella Prices Fixed

About 1,400,000 umbrellas were placed on the market at controlled rates for this season. The Controller-General of Civil Supplies has approved the maximum retail selling prices chargeable by dealers in respect of gents' umbrellas of eight ribs 25 in. long. For this purpose umbrellas have been divided into four classes, A, B, C and D, according to the material used, and their retail selling prices will range from Rs. 4 (D class) to Rs. 8-15 (A class). Each umbrella will have its price either marked or printed on it.

Profit margins have also been fixed in respect of umbrellas for women and children and superior class of umbrellas. The retail selling prices worked out on the basis of the sanctioned profit margins will be printed on these umbrellas.

These prices have so far been made applicable to the Bombay, C. P., Bengal, Assam, Bihar and Orissa provinces and a part of the U.P

Went to Office in a Sari!

Cartoon by Alex Taylor—reproduced by kind permission and courtesy of the *Evening News of India*, Bombay.

Had no Dhoties, So Wore Sari !—An assistant of the Bihar Government Secretariat at Patna was seen wearing a *sari* when he went to work in the office recently.

When questioned, he referred to the cloth scarcity and said he had no more *dhotis* left.

Commercial and Technical Organizations

Indian Merchants' Chamber, Bombay

Quarterly General Meeting.—The first quarterly general meeting of the Chamber was held on Friday the 11th May 1945, with Mr. M. A. Master, President in the Chair. In the course of his address, Mr. Master covered the problem of sterling balances, their importance to the rapid industrialization of India and the participation of foreign capital in post-war industrial reconstruction. The merchants' views on the procurement of foreign capital are directly opposed to those of some industrialists who consider it desirable so long as the controlling interests in industry remain in Indian hands.

The following are extracts from the speech of Mr. Mahomed Husein Hasham Premji, Vice-President:—" A topic next in importance only to food is the shortage of cloth in the country. The way the cloth situation has developed also bears a strong resemblance to the food situation. Minimum pre-war normal consumption with hardly any margin to fall back upon, a small import which stopped as a result of the war, considerable increase in demand for purposes connected with the war and for export, failure on the part of the authorities to envisage the problem in its entirety and finally a situation of gathering crisis, these are the essential features common both to food and cloth situation. The pre-war consumption of cloth in India has been estimated at about 6,150 million yards, comprising 3,800 million yards produced by mills, 1,600 million yards by handlooms and about 750 million yards net import from abroad. The war created a new demand for the military and also for export. This ought to have been met and could have been met by speeding up production and by an efficient system of control over prices and distribution. Actually while the production of mill-made cloth reached at one stage the figure of 4,800 million yards, the handloom production is stated to have fallen by about 30 to 40 per cent. As early as December 1942, the Federation of Indian Chambers of Commerce and Industry warned the Government that their policy was likely to lead the country into a cloth famine. But evidently this had no effect. Textile control came in late enough and even then its success in the earlier stages was mainly due to the releasing of certain accumulated stocks.

In 1939-40 the export and war demand was 659 million yards, in 1940-41, 1,154 million yards, in 1941-42 it went upto 1,985 million yards and in 1942-43 it reached 2,500 million yards. This left the country nearly 2,500 to 2,700 million yards for civilian consumption which declined from 16 yards to about 8 yards per head. This is too heavy a sacrifice for a country like India where consumption was already at the minimum level and where people could hardly have reserves to enable them to economize and pull through a number of years. In a situation like this it was wrong on the part of the Government to have allowed and encouraged the export of cloth to the Middle East countries.

We are now told that the demand for the services and the allotment for exports have been greatly reduced. At the same time, production has not been maintained and from the peak level of 4,800 million yards, it has come down by nearly 1,000 million yards. There is thus neither sufficient cloth in the country, nor are there adequate arrangements for effective distribution. As in the case of food, so in the case of cloth, the Government have failed to secure a substantial increase in production. Mills have been working double shift and triple shift. But no new plant and machinery have been set up and no steps have been taken to improve the efficiency of the industry so as to enable it to contribute more substantially to the war effort and to hold its own against foreign competition in the post-war period. Only the other day we were told about the plight of handloom weavers in Surat who could not get yarn for carrying on their business. Here is another instance of the failure on the part of the authorities to make the most of the existing opportunities for increasing production so as to cope with the demand resulting from the conditions created by war. The shortage of coal again has proved a serious bottleneck which has hampered the increase of production in several lines of industry and it has been estimated that in a single period of three months last year the short-fall of cloth production on this account alone was about 100 million yards. Statistics are not available to show the loss of production as a result of the lack of essential stores, spare parts and machinery which could have been imported from abroad if a proper policy had been adopted in the early stages. The working of cloth control in this country has been characterized by exchange and make-shift experiments such as the standard cloth scheme, faulty and haphazard distribution and a tendency on the part of the authorities to ignore the advice and assistance of the trade in handling the situation. This is not the time to apportion blame but I do feel that the time has come when an immediate drive should be undertaken to increase the production of real utility cloth in the mills, to stimulate handloom production, to stop all purchases by the Supply Department and to prohibit all exports. It is only when production is thus increased and the total supply available is reasonably adequate, that distribution could properly be organized so as to make available to the masses what they cannot afford to go without.

This Chamber has made repeated requests for being represented on the Textile Control Board. But so far neither we nor a number of other interests concerned have been given such representation. There are so many varieties of cloth produced and there is such a diversity of needs and tastes in the country that the problem of efficient production and equitable distribution of this article of vital necessity in a country of the dimensions like India, cannot be solved unless the Government seeks the co-operation of all concerned and launches upon a vigorous policy of maximizing production, eliminating waste and organizing distribution all over the country. The problem of cloth is again not a problem of making India self-sufficient in the matter of adequately clothing its teeming millions but there is the equally important problem of enabling India to manufacture sufficient cloth to feed the markets of adjacent countries like Burma, Iran and the Near East.

The entire war-time economic policy of the Government of India has been unsympathetic to the growth of industries; and it is a matter of regret that the same policy is being pursued even now in spite of repeated protests from commercial organizations and also from the general public. This policy of indiscriminate imports will, I am afraid, endanger seriously the growth of Indian industries.

A large number of Indian concerns have already come into existence with capital subscribed and paid and deposited with the Government of India. The Government are now noting down the requirements of the various industries by way of capital goods in the post-war period. Industrialists are being asked to inform Government of the names of their suppliers in respect of such goods and to negotiate their purchases in advance. This procedure will, I am afraid, deprive the Indian industrialists of their legitimate right of bargaining for the most favourable and competitive terms from suppliers overseas. It is not my purpose here to make out a case for the entire stoppage of foreign imports. India needs, and will continue to need, certain types of goods—consumer goods as well as capital goods—for a long time to come, but such imports must be in pursuance of a properly planned policy and must be undertaken after a proper consultation with and full concurrence of the representatives of Indian trade and industry."

Madras Provincial Handloom Weavers' Association, Nidubrolu

Working Committee Meeting.—The Working Committee of the Association met on the 2nd May 1945 and elected Prof. N. G. Ranga as the President of the Association. They have resolved to start a Telugu weekly called "*Chenetha.*"

Rajahmundry Spinning Mills.—Since the management of the Satyanarayana Spinning Mills, Rajahmundry, are resorting to such measures as closing down the mill on such small pretexts as repairs to boilers and machinery and are thus causing loss of production to the extent of 150 bales of yarn per month, the committee urged the Government to conduct a thorough enquiry into this matter and take necessary measures to make the mills work regularly by appointing an administrator.

Restriction on the Export of Handloom Cloth.—The General Secretary of the Association states that the recent decision of the Provincial Textile Commissioner, Madras, to restrict export of handloom cloth, particularly of 40s and above counts out of Madras province has led to severe reactions in big weaving centres like Chirala. For instance, the price of Madras shirting, which is mostly exported to Upper India, precipitately fell from Re. 1-8 per yard to Re. 0-14-0. Such a fall naturally led to an immediate reduction in the wages of weavers not only in this variety but in others also.

At this stage any restrictions on export of hand woven cloth to other provinces will lead to scarcity of cloth and consequent black-marketing in the importing centres without any corresponding benefits to the consuming public in the production centres. On the other hand, the industry and connected trade will suffer irreparably and the poor weavers are already hard hit.

If the intention of the restrictions on exports is to provide more cloth for local consumption and to reduce the general price level of handloom cloth, I am afraid we will be severely disappointed. There can be no greater impetus for enhancing production than a favourable wage to the weaver, provided adequate supply of yarn, both grey and coloured, at controlled rates is assured. Restriction of exports has already proved to be a step which has not only reduced the reasonable wage of the weaver but has also considerably curtailed the production of handloom cloth in general. I hope that the Provincial Textile Commissioner will reconsider his decision and will at least permit exports of all counts up to pre-war limits.

Madras Yarn Merchants' Association, Madras

Annual General Meeting.—The seventh annual general meeting of the Association was held on 21st May with Mr. Kissendoss Girdhardoss, President of the Association, in the chair. The annual report was adopted.

Office-bearers for the Year 1945-46

President: Dr. Rm. Alagappa Chettiar, D.Litt., LL.D., Bar-at-Law. *Vice-Presidents:* Messrs. T. N. K. Govindaraju Chettiar and C. Cunniah Chettiar. *Hon. Secretary:* Mr. S. N. Kasiyappa. *Joint Hon. Secretary:* Mr. Jayantilal Chokshi. *Hon. Treasurer:* Keshavlal & Co. *Members of the Committee:* Messrs. S. Abdul Shukoor, Grandhi Narasayya Chetty, Becharbhai, Vallabhdas D. Dutia, Valji Kanji & Co., M. P. V. Sundararamier & Co., T. R. Swaminathan Bros., Y. Satariah Chetty Sons; Kissendoss Girdhardoss, C. Ethirajiah and Abdul Sattar Haji Mohamed.

President's Speech

In the course of his speech the incoming President Dr. Rm. Alagappa Chettiar, dealt with the subject of control and said that these controls and restrictions which are put upon persons, trade and business and in other walks of life must continue to remain only to the extent such controls can justify themselves.

They were grateful for the way in which controls had been exercised in the Madras Province, thanks to Mr. S. Venkateswaran and his staff. But he emphasized that technicalities in the matter of controls must be relaxed and there must be humanizing of the system. In such a matter as administration of business, technicalities would be a handicap to the business instinct and advance. He hoped the authorities would remember that the business community must not be made to suffer in order to satisfy a particular provision or a little amendment to their order or regulation. What is wanted is not the severity of control but the assuring of proper supply of yarn to the weaver and cloth to the people.

Proceeding, the President said that seeing that most of the spinning mills were in Coimbatore and Madura, it was indeed sad that the Control Office should be in Madras. It would be better if the Government appointed officers with suitable powers in Madura and Coimbatore to pass orders without delay and thus mitigate hardship.

The President next appealed for support in the matter of housing the Association in a building of its own.

Bengal Millowners' Association, Calcutta

Quarterly General Meeting.—The first quarterly general meeting of the Association was held on the 8th May, 1945 with Mr. B. M. Bagri, President, in the chair. The following are extracts from his speech:—

"The cloth situation in the country has been more acute than ever before. As always when things go wrong, there is a great deal of misinformed criticism and misunderstanding of the nature of the difficulties to which the cloth shortage in this country is to be attributed. One even hears the strange observations that the shortage has been the creation of the textile industry. I need only quote a few elementary figures to show how completely misplaced this criticism is. Before the War, the annual production of textile mills in India was 3,800 million yards. During the war, the mills have faced many severe obstacles, such as lack of machinery, shortage of coal and stores and, in the weaving section, an acute shortage of yarn. Nevertheless, the mills have succeeded in raising production to 4,800 million yards which is over 25 per cent. above pre-war production. Had the Government helped with supply of coal, stores, etc., we would have been able to reach a production of up to 6,000 million yards which would have solved this problem of shortage to a very great extent. In spite of these handicaps the Industry Committee of the Textile Control Board has put forward a scheme for standardization which we hope may yet increase the production by 10 per cent.

The cloth famine in Bengal has been raging for more than 12 months. Even now its fury seems still increasing. But curiously enough, situated as we are, we find that our hands are tied.

Existing difficulties acutely felt by the public in this Province of Bengal more than elsewhere, are not to be attributed to a failure of production but to the failure of distributing agencies to ensure that the reduced stock available was properly distributed. Before the war, the *per capita* consumption of cloth in India was 15½ yards. During the war, owing partly to the large amount of money in circulation, *per capita* consumption has increased according to my estimate, to about 20 yards. But the total production is not sufficient for more than twelve yards per head. There is, therefore, a shortage of roughly 40 per cent. in supply. Obviously, with so serious a shortage in supply, unless adequate measures were taken by the Provincial Governments who were entrusted with distribution, there was certain to be an acute shortage of cloth almost over the whole country. In this province of Bengal the Government failed lamentably to appreciate this fact; they failed to restrict indiscriminate consumption in time with the result that the poor have suffered very severe hardship. It is true that in some cases the Government's task has been made more difficult by black marketing by certain dealers in the trade; but the Government, had it intended to act with firmness according to a set plan from the start, had adequate powers to deal with refractory dealers. They would have received the full support of the public and certainly of the millowners who, selling at fixed prices, are anxious that the full benefit of price control should reach the poorest numbers of the community. The industry has voluntarily reduced the prices of its products which are to-day being sold at a figure of about 60 per cent. below their peak level. I doubt if any industry in the war has such a record of increased production at a greatly reduced price as that enjoyed by the textile industry of this country. But the task of distribution is still not being handled in a satisfactory manner.

As you are no doubt aware, the Government of Bengal undertook a cloth drive in the city of Calcutta and have taken possession of all stocks lying with the dealers through their handling agents. It has recently been announced that an interim system of rationing of cloth will be introduced in Calcutta under which the Central Civil Supplies Committee assisted by the various Ward Committees will recommend priorities and cloth will be distributed through the approved shops to persons holding these priorities. I do not know how far this system will prove to be successful but I regret to state that the millowners have not been consulted at all in the matter of distribution. I am sure you will agree with me when I say that as the representatives of the industry we are keenly aware of our responsibility in finding out a solution of this very vital question of shortage whose menace has come to stay. I am sure that if the Provincial Government took the millowners into confidence, a suitable scheme of distribution could be evolved in which the mills themselves would have borne the main burden of distribution.

The only thing left now is rationing. But rationing, unless it is worked by an adequate, honest and efficient staff, may well make things worse instead of improving them. The selection of this staff is much more important than lip service to the doctrine of rationing, the need for which we all accept. It is hoped that the Government of Bengal will take adequate measures in its choice of personnel to see that the rationing of cloth is a real success.

The clouds of war are lifting in the West. It is necessary that we should give full thought to problems of post-war reconstruction. That there is bound to be a great expansion of the textile industry may be taken for granted. The Post-war Planning Committee has decided to import 40,000 looms and 2.75 million spindles and if this decision is implemented, added production by the industry will be very large. But we are entitled to serious misgivings on one point; and that is in regard to the future of the textile machinery industry in this country. This industry has had to face extraordinary difficulties and has only been established after the most serious obstacles have been surmounted. Are all these efforts to be lightly thrown aside and the industry virtually nipped in the bud by mass imports without any guarantee of a market for local producers and without any protection from the full blast of foreign competition? I attach, and I am sure all of you will attach, the greatest importance to the building up of a vigorous textile machinery industry in this country with the least possible delay. If we had built up such an industry before the war capable of producing preparatory machines and spindles as well as looms, we would not have faced a yarn shortage and an acute cloth crisis of the type that we have recently witnessed. We must protect ourselves against similar mistakes in the future. This can only be done by giving every support to the industry now, and I have no doubt that we should impress on the Government of India this vital need, when they are arranging for imports of textile machinery, to see that the fullest use is made of the country's productive capacity. Failure to give this matter due consideration may involve the breaking up of a vital national industry, the future of which is essential to textile development in India."

Upper India Chamber of Commerce, Cawnpore

Post-war Requirements of Capital Goods.—The Secretary to the Government of India, Department of Commerce, New Delhi, supplied the Chamber with a copy of a Press Note issued by Government on the subject of registration of post-war requirements of capital goods. It was stated that the objects of Government's scheme were fully explained in the Press note and the hope was expressed that members' firms of the Chamber would fully co-operate with the Government of India in the arrangements come to, which were designed to assist in the development and expansion of Indian industries.

According to Government's instructions, orders for goods which were expected to be shipped before the 1st July 1945, need not be registered, but for such goods import licence should be applied for in the ordinary way. As regards orders for capital goods which were likely to be shipped after the 1st July 1945, these must be registered except that it was not necessary to register orders for machine tools of an estimated f.o.b. value of less than Rs. 10,000 and for other capital goods of an estimated value of less than Rs. 25,000.

Training Abroad of Higher Technical Personnel for Post-war Industrial Development.—Under cover of his letter No. TRC II-1140, dated the 12th December 1944, the Joint Secretary to the Government of India, Department of Labour, New Delhi, invited the Chamber's attention to the Government of India's proposal to send from this country to the United Kingdom or the United States of America trainees for higher technical training for the purpose of making good the serious deficiency in skilled technicians, particularly of the higher categories, which Government envisaged would constitute one of the most serious bottlenecks in the industrial development of the country. Government asked to be supplied with the names and full particulars of any candidates which members of the Chamber considered should be sent abroad for higher technical training, the candidates to be persons possessing a university degree in science or engineering or equivalent diploma and to have had at least three years' industrial experience in India. As regards the question of cost, the Government of India hoped that in most cases industrial firms or associations would be able to meet the full expenditure on account of their own trainees provided facilities were secured through the Government of India in accordance with their requirements. In certain cases, however, the Government of India would be prepared to consider giving financial assistance.

The Director of Industries and Commerce, United Provinces, Cawnpore, informed the Chamber that the cost of training would be approximately Rs. 10,000 for each student and that the period of training would extend to two years. It was Government's view that the textile industry was already well established in the United Provinces and accordingly there was no reason why the industry should not itself pay for the advanced training of any students sent to the United Kingdom under Government's scheme. The Director of Industries and Commerce requested that members of the Chamber should be informed of the scheme with the request to submit to the Director of Industries and Commerce direct details of any students which they desired to send to the United Kingdom for advanced training in technical subjects.

Government Central Textile Institute, Cawnpore.—Mr. J. F. Bernard, The Cawnpore Cotton Mills Co., Cawnpore, was nominated to represent the Chamber on the Committee of the Institute, *vice* Mr. S. Catterall, resigned.

Mysore Chamber of Commerce, Bangalore City

The Committee of the Mysore Chamber of Commerce has addressed a lengthy communication to the Government of Mysore protesting against the Mysore Excess Profits Tax (Emergency) Act. The Committee views with grave concern the introduction of it as an emergency enactment. The time for the levy of the tax is highly inopportune and the method of its introduction as an emergency measure almost on the eve of the session of the Legislature, far from satisfactory. The Chamber being the accredited organization representing trade and commerce of the State feels it its duty to protest against a tax which is so iniquitous in its incidence and fraught with such serious consequences to business and industrial enterprise in the State.

The Government's continuous interest all these many years in fostering the industries of the State and the active part they had taken in many of the industrial enterprises started under their ægis have been a matter for pride to the subjects of the State. It is all the more surprising, therefore, that after nearly five years of war economy, the Government should have now thought of a tax which not merely affects seriously the existing industries but will greatly hamper further industrial enterprise in Mysore.

The Committee has also referred in this connection to the Bill to increase the rate of income-tax and has said that the imposition of this double burden is more than what the trade and industrial prosperity of the State can withstand.

REVIEWS

Modern Cotton Spinning and Doubling Machinery (With Plans of Modern Layouts). By J. Buckley, Chief Mill Planning Engineer, Platt Bros. & Co., Ltd. Published by Platt Bros. & Co., Ltd., Hartford Works, Oldham, England, in collaboration with Howard and Bullough Ltd.

Very important developments have taken place in recent years in textile machinery, to which publicity has now and then been usually given by the trade and technical Press. But there has been no single book embodying all the latest developments within its two covers for the benefit of the technician and the student. And this want is more than amply satisfied by the publication under review. It deals clearly and cogently with the different aspects of modernization which, generally speaking, means:

Single-process lap making, which gives better blending, opening and cleaning, with laps regular in weight, and obtained in most cases with fewer machines and operatives.

Short cut processing in the card-room, utilizing high-draft speed frames, thus enabling rovings to be produced with fewer machines and fewer operatives than required by the old methods.

High-draft ring spinning of yarns, using methods giving greater control of the fibres and requiring a reduced number of card-room machines for any given output, as compared with the ordinary drafting system.

Production of large packages at relatively high speeds, thereby improving efficiency and providing distinct advantages in subsequent operations.

Introduction of individual electric motor drives, correct humidification and air-conditioning, as well as modern internal organization and modern layout. These assist in obtaining the highest possible production and efficiency from the plant and also provide better working conditions for the operatives.

Plants differ considerably in their make-up according to the class of cotton to be worked and the particular yarn characteristics desired. These will affect the degree to which any of the foregoing can be applied to a particular plant. A modern blow-room unit working Egyptian cotton, it is said, would have four machines to each combination, while Indian cottons would require nine machines to each combination, although the term "single process" is applied in each case.

The excellent book under review shows how modernization affects the coarse, medium and fine sections of the trade, the type of equipment required and the most economical means of producing and the advantages to be gained. Comparisons may be made with present-day organization for the production of similar counts.

The publication of this book at present is highly opportune, since mills everywhere are busy planning their re-equipment and modernization programmes. Owing to paper shortage, however, the publishers have brought out only a limited number of copies, but it is proposed to make the volume available to the public, when the situation improves, at the price of 7*s*. 6*d*.

The Lancashire Textile Industry, 1945. Published by John Worrall Ltd., Oldham, England. Price 21*s*. post free.

The above well-known directory and reference book is now in its 60th annual edition. It has always been specially compiled to serve as an advertisement medium for all who have goods or services to offer to the textile industry of Lancashire. It contains full particulars of all cotton, wool, silk and rayon spinners, manufacturers, dyers, bleachers and finishers and other branches of the industry using power. Fully classified and indexed as usual its standard is quite in conformity with what its readers have come to expect from it.

The information contained in the volume has been thoroughly revised and it bears every evidence of the great care that has been bestowed on its compilation. This is the second time that it is appearing in its reduced war-time binding style, and its compactness should commend itself to many of its readers. Moreover, the quality and value of the book as an advertising medium for providing a permanent day-to-day contact with cotton trade buyers is as indisputable as ever.

Complete Income-tax Ready Reckoner, 1945. By R. C. Doodhmal, F.I.S.A., G.D.A., RA. Published by Popular Book Depot, Lamington Road, Bombay. Price: Rs. 2-8.

A new edition of Mr. Doodhmal's ready reckoner has become necessary on account of the changes introduced by the Indian Finance Act, 1945. It should meet with the requirements of all classes of tax-payers in general and of accountants, income-tax experts, business men, banks, joint-stock companies, insurance companies, etc. It contains income-tax and super-tax tables giving calculations useful to every individual, Hindu undivided family, unregistered firms or other associations for all income over Rs. 2,000 on the basis of the usual rate of tax plus the revised rate of surcharge. It contains income-tax and super-tax tables applicable to limited companies, local authorities and non-residents together with a table giving calculations of income-tax and super-tax for life assurance companies. Tables applicable to the computation of super-tax of limited companies at the rate applicable to the profits distributed by way of dividends other than fixed dividends on preferential shares as well as to the profits not so divisible are given.

It contains also a table giving net and gross dividends at the rate of 30 pies plus the surcharge of 24 pies in the rupee which will greatly help investors in the collection of their income-tax refunds. Calculations for arriving at the amount of excess profits tax and compulsory deposit payable to the Government are also included in the book.

Statistical Abstract of the Baroda State (from 1933-34 to 1942-43). Price: Re. 1-9.

During the year 1942-43, the number of cotton mills working in the State was 18, the same being the number in the previous year. The total capital employed (which included debentures, deposits and loans along with paid-up capital) stood at Rs. 505 lakhs which was nearly the same as in the previous year. The number of looms was 6,927 in 1942-43 as against 6,932 in 1941-42. The number of spindles was 332,208 which showed an increase whereas the number of persons employed (23,982) showed a decrease when compared to that of the previous year. The quantity of yarn and woven cloth produced in 1942-43 was 43,422,915 lbs. and 28,429,736 lbs. as against 43,177,457 lbs. and 33,969,026 lbs. respectively in the previous year. The progress made in the last decade will be clear from the corresponding figures for 1933-34. In that year the number of cotton mills working in the State was 18 ; the total capital employed was Rs. 21,518,669 ; the number of looms was 5,474, the number of spindles 272,264 and the number of persons employed 13,117 ; the mills produced in that year 23,800,727 lbs. yarn and 18,079,138 lbs. woven goods.

Modern Precision, Vol. 4, No. 1. Published by Leeds and Northrup Company, 4934 Stenton Avenue, Philadelphia 44, Pennsylvania, U.S.A.

Any industrial man who has a problem which must be solved through the use of measuring instruments and controls should be interested in Leeds and Northrup Company's recent publication, which briefly describes *all* the company's products for regulating plant processes.

Because so many of these processes depend on close temperature regulation, one section of this 28-page "General Catalog" issue of *Modern Precision* describes the instruments for measuring by each of the company's four pyrometric methods: Thermocouple, Rayotube, Thermohm and Optical. For other plant processes, equipments which measure such quantities as pH, speed, gas analysis, etc., are described. A large chart shows the particular instrument model which is available in each case . . . installation photographs show the equipments in service.

Another section is devoted exclusively to a discussion of the company's heat-treating furnaces, with a page describing and illustrating each method: Vapocarb-Hump Hardening, Homocarb Carburizing, Homo Nitriding and Homo Tempering. Also described, in still another section, are laboratory instruments, long used in industry. And there is a description, too, of the equipments widely used for increasing power plant efficiency.

NOTICES

Supply and Distribution of Various Types of Indian Cotton During the Season, 1942-43. Indian Central Cotton Committee, Bombay, Statistical Bulletin No. 13. Price: Re. 0-12-0.

According to the above bulletin the total estimated outturn for 1942-43 was 4,702,000 bales, against 6,223,000 bales in 1941-42, the average yield per acre being 98 lbs. and 103 lbs. respectively. The ascertained areas under improved varieties of cotton was 10,382,000 acres or 54 per cent. of the total against 36 per cent. in the previous year. Of the acreage under improved cottons, medium and long staple ($\frac{7}{8}''$ and above) constituted 9,729,000 acres against 7,703,000 in the previous year.

The total of supply and distribution for 1942-43 would stand at 91.4 and 89.4 lakh bales respectively. Taking into account the estimated deficiency in the voluntary figures of stocks held by the mills on 31st August 1942 and exports and extra-factory consumption of 450,000 bales, the grand total of supply and distribution for 1942-43 would be 92.9 and 95.7 lakh bales respectively.

Distribution of Electricity, Vol. XVII, April 1945, No. 158. Published by W. T. Henley's Telegraph Works Co., Ltd., Editorial Offices, 51/53, Halton Garden, London, E.C.1, England, the latest issue under notice, includes a few salient facts from the reports of the Central Electricity Board in England for the years 1940-43.

J. K. Review, May 1945, Vol. 5, 8. In the course of an article in the above issue of the well-known Cawnpore house organ, Mr. P. C. examines the prospects of the Indian cotton mill industry and pleads eloquently for taxation reliefs. He urges that the excess profits tax should be withdrawn and the amounts that would otherwise have become payable as excess profits should be held in reserve for renovation of textile machinery and plant.

We have received from **Messrs. Khatau Valabhdas & Co., 271, Vadgadi, Bombay 3,** a stoutly built table perpetual calendar made of polished wood. Khatau Valabhdas & Co. deal in dyes of all kinds for textiles, soaps, oils, leather and paints.

Exports of Canadian Machinery to India

Indian Trade Commissioner's Report

BEFORE the war the only items of machinery, millwork and factory equipment of Canadian manufacture that found their way into India were some agricultural equipment and implements. During the war some wooden mechanical parts, such as bobbins and spools, for use in the textile industry, metal-working machinery and machine tools, wood-working machinery and miscellaneous items of industrial equipment have also been exported to India, some on private account and others for use in war plants. Recently an order for the supply of Canadian-made locomotives for use on the Indian railways was also placed through the Indian Supply Mission and it is understood that a number of these locomotives have already been shipped to India including a good supply of spare parts, etc.

Canada manufactures to-day quite a variety of machinery and industrial equipment and there seem fairly good prospects of these being exported to India in increasing quantities after the war. The principal types of plant and factory equipment which might become available from Canada for export to India after the war are the following:—

(*a*) Dairy equipment, including combined butter workers and churns; cream separators (various sizes, both hand and power driven); and automatic and hand can-seaming machines, etc. (*b*) Wood-working machinery, including sawmill equipment. (*c*) Metal working machinery, including lathes, planers, presses, etc. (*d*) Shoe machinery. (*e*) Heavy industrial equipment, including pulp and paper equipment; roadmaking equipment; textile machinery; canning machinery; rolling mill equipment; mining machinery; plastics machinery; boilers and other combustion equipment; pumps, fans and compressors; bakery machinery; elevators; electric furnaces; marine diesel engines. (*f*) Hydro-electric equipment, including complete installations; generators; transformers; hydraulic motors, etc., and (*g*) Agricultural equipment.

COTTON TEXTILE MILLS

interested in increasing their weaving shed production by 2 yards per loom per day (18 hours) may please write to "Textiles," c/o Indian Textile Journal, Surya Mahal, Military Square, Fort, Bombay. Will arrange demonstration tour according to Provincial Call. Free trials given.

(Advt.)

TRADE LETTERS

(From Our Special Correspondents)

Ahmedabad

THE distribution system introduced by Government to check black markets in cloth is not working satisfactorily. Owing to the frequent closing down of bookings on different railways there is unusual accumulation of stocks in the godowns of local merchants while shortage of cloth is increasing in deficit zones. Rents of godowns have increased from 400 to 500 per cent. in Ahmedabad during the last two months. The distribution system in deficit zones also is not working satisfactorily. It takes from two to three months for cloth purchased by permit-holders from surplus areas to reach consumers, in deficit areas. There should be more distributors preferably one or more in every taluka town, and their selection should be made from experienced business men of proved integrity. There should be no place for nepotism or corruption. The new trade channel that has been created by Government should be more efficient and honest than the old one which has been scrapped.

The utility cloth that is being manufactured since 1st June under the orders of Government will be predominantly grey as the margin of profit in grey cloth is fixed 5 per cent. higher than in bleached cloth, to save coal and other bleaching materials. It will be as unpopular as the standard cloth which is not in demand in many places. The bleaching process which the local and other mills developed after the last war will receive a setback, and when foreign cloth is imported Indian cloth will be ousted from the markets. These fears are being entertained both by merchants and manufacturers regarding their post-war prospects. Government should allay them by announcing a change of policy with the return of normal times.

The question of dearness allowance for local mill operatives is getting acute. The Ahmedabad Millowners' Association is stern in rejecting the demand of the Labour Association for the continuance of the dearness allowance beyond the period stipulated in the agreement made between the two associations in 1940. The millowners are agreeable to pay dearness allowance on the scale paid in Bombay, but the local Textile Labour Association is reluctant to accept any lower scale than the present which once shot up to Rs. 73 per month per worker while it does not exceed Rs. 30 per month per worker in Bombay. Thus the dispute is being lengthened and the workers are getting restless. The dispute has been referred to the Industrial Court whose decision is being eagerly awaited.* Industrial peace which is the marked feature of the Ahmedabad textile industry should not be disturbed lightly.

Ahmedabad industrialists who think that they will not be allowed to start any more mills by Government in Gujerat are planning to start other allied industries, preferably in an Indian State where all sorts of facilities are available. Chemical industry is the one industry attracting the attention of our industrialists, one of whom has started a big factory in Baroda. No other post-war activity is visible among our industrialists.

Indore

Efforts to Increase Production

IN accordance with the new Textile industry (Control of Production) Order, 1945, the mills in the area have set out working on the new scheme which aims at an increase of at least 10 per cent. over individual mills' 1944 production by limiting the number of counts and sorts manufactured by each mill. The essential factor in obtaining increase in cloth production per loom-hour is the reduction in the average pick of the mill. It remains to be seen how far this reduction materializes in respect of mills in Central India and Rajputana because most of the mills were already making cloth of even lesser picks than what are now suggested in the scheme for different count groups and any further reduction in the same might result in the cloth becoming less durable and unpopular. Also much depends upon the regular and good quality supply of coal which till now was far from satisfactory, and also of other essential millstores, raw materials, etc.

Bonus Dispute at Ujjain : Labourers' Strike

The workers of all the four mills at Ujjain have struck work. The strike started from the Binod Mills on the 12th May 1945 and spread to other mills gradually. It is learnt that the millowners have offered a bonus equivalent of 2½ months' basic earnings during 1944 whereas the labourers demand it for 2 3/4 months. It is also understood that some labour leaders have been arrested by the Government. The strike still continues and this is highly regrettable at a time when the country is in dire need of cloth.

Coal Position

Though there were less frequent close down of mills due to coal shortage in the last month yet the position continues to cause anxiety. The present stocks with the mills are hardly sufficient to give any optimistic view of regular and smooth running in the near future.

The coal position in the Indore mills appears to be bad due to frequent change of source of supply. The supply was originally being received from C. P. coal-fields but appears to have been switched over to Bengal and Bihar fields early last year. During the later half of the same year the coal was received both from Bengal and C.P.

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*A decision has since been given in favour of the workers. See news on page 681.

but early this year the supply is again being made from C.P. These sudden changes appear to be the cause of inadequate and irregular supplies. In the light of the above, the desirability of investigating the possibility of a fixed source of supply need hardly be stressed.

Distribution

This side of the textile trade still presents considerable difficulty. Though the position in the local market has eased down since last month, it is reported that quite a large stock is lying at Ujjain undisposed. There also appears to be considerable lack of uniformity of policy in British India and Indian States and this is a main handicap in the planned distribution of cloth. It appears that the arrangement of distribution through a Co-ordinating Authority at Ajmer for Rajputana Deficit Zone is also not quite successful in solving the problem.

Cawnpore

Government to Compile Cost of Living Indices

THE Government of the United Provinces have decided to prepare cost of living indices for important urban centres in the province for one or more classes of the people. If possible, it is understood, a consolidated weighted index for the whole province might also be prepared. At present cost of living indices are prepared only for mill workers at Cawnpore and for Government servants at five centres, namely, Meerut, Bareilly, Lucknow, Benares and Gorakhpur. The amounts paid as dear food allowance to factory employees as also Government servants, it may be mentioned, is based on this, and the indices of cost of living in the different urban areas of the province will have, therefore, more than academic interest, as in the post-war period when the question of gradually reducing the dearness allowance will become more important. The Government, it is understood, have also decided to conduct family budget inquiries in the rural areas by the random sample method. Mr. M. C. Pant, the popular Government Labour Officer, to whose energy and earnestness much of the success of the Wages Enquiry Survey, Cost of Living Index Figures Compilation, and determination of the payment of dearness allowance depended, it is said would be put in charge of the section. The necessary machinery is being set up, and work will be taken in hand shortly.

The Government, it is also understood, are contemplating preparing indices of urban productivity and economic activity generally. Separate figures will be available to show variation in various branches of economic activity. A combined index will be prepared every month to serve as a barometer. Industries, minerals, fisheries, dairy products, engineering manufacturing and exports are some of the main heads under which information will be collected. The scheme is proposed to assist the Government in assessing properly how much progress its various post-war plans have achieved.

There is also a proposal to set up "Trade" or "Wage" Boards to ameliorate the condition of labour in "sweated" or unorganized industries. It is proposed to make an enquiry into the condition of labour in several organized industries of the U.P. by the Trade Boards appointed for such industries with a view to ensuring reasonable wages.

Success of Rationing

From 1st of May 1945 we were having total rationing in the city of Cawnpore. It may be remembered that for about a year now, we were having a sort of "partial" rationing. The change-over from partial rationing to "total" rationing was not nearly as radical a step as many imagined. Over 340,000 labourers employed in mills and factories were already full rationed and were getting foodgrains at subsidized rates from their employers. Of the remaining 400,000 people, 60 per cent. roughly were given ration cards under the partial rationing scheme (for people whose income was less than Rs. 40 p.m.). Total rationing has now been introduced and wheat and wheat products, rice and rice products, and bread cannot be procured except from authorized Government retailers and except on the presentation of a ration card or ration permit.

With the introduction of total rationing in the city, the cost of living index has been further reduced. The working class cost of living index number in Cawnpore for the month of May 1945 is 294 and the subsidiary index is 262. The corresponding figures for the same month last year were 315 and 278 respectively as against the previous month, the general cost of living index figure fell by 17 points, while the subsidiary fell by 10 points—the food group numbers fell from 334 points to 304 points. The decrease, it is explained, is due to rationing.

Problem of Cloth

The cloth position in the Province has become very acute. The public is facing unprecedented difficulty owing to the scarcity of cloth. As was recently admitted by the District Supply Officer, Mr. K. C. Shukla, when questioned by the District Magistrate and Collector Mr. Stephenson, I.C.S., "he could hazard the opinion that 60 per cent. of the cloth given to the dealers reached the consumers, and 40 per cent. went into the black market." He was sorry that such a thing was happening but there was no escape for it. Mr. Shukla himself admitted that while they had schemes of distribution of fine cloth, they had not received any fine cloth at all in the city to date.

The U.P. Kapra Committee at its annual general meeting also put in a strong plea that sufficient quantity of cloth be imported into the province to relieve the acute scarcity of cloth. The President contended that while the Government promulgated several Textile Control Orders, they showed utter disregard to the wishes of cloth traders. He also deprecated the Government's policy by asserting that nothing was being done to effect a full control of the U.P. mills, and to allot the quotas to different districts of the province. He also spoke of the corruption that prevailed at every stage of the cloth trade. The Committee also passed a resolution requesting the Government to withdraw the war risk insurance due to the cessation of war in Europe.

The Textile Commissioner to the Government of India has opened a branch office in Cawnpore and an Assistant Textile Commissioner has been put in charge. The Provincial Government has also appointed its own Textile Commissioner, Mr. Royston, to help to ease the situation. The Assistant Textile Commissioner to the Government of India, it is understood, will now issue permits for export of cloth from Cawnpore. It is also learnt that a quota of 10,000 bales of yarn has been fixed for the province which the Assistant Textile Commissioner will distribute among the different districts.

Lucknow Chamber of Commerce

A new Chamber of Commerce has been formed in Lucknow to foster the trade and commerce of the province. The inaugural meeting was held on the 14th May with Mr. J. N. Ahuja, Agent, Central Bank, in the chair. Mr. Ranjit Singh, O.B.E., Managing Director of the R. G. Cotton Mills, welcomed the formation of the chamber adding that Lucknow needed a chamber of commerce badly being the capital of the U.P. He hoped that the Chamber would help to foster the business and trade of the mercantile community. The following were elected office-bearers of the Chamber for the ensuing year :— Mr. Ranjit Singh, O.B.E., President; Mr. Newul Kishore Halwasiya, Chairman, Lucknow Municipal Board, Vice-President; and B. S. Talwar, Hon. Secretary and Messrs. J. B. Bhalla, J. N. Ahuja, Munshi Ram Kumar Bhargava, R. B. Prithvi Nath Bhargava, Seth Kishori Lal, Ehtisham Mahmud Ali, Har Saran Singh Thapar, S. Singar Singh, Chamanlal Mehta, and B. D. Gupta as members of the Executive Council.

Victory Celebrations

Cawnpore went all agog when the news of the surrender of Germany was announced. A sigh of relief was heaved by all, that the bloody war has at last come to an end in Europe. The Employers Association of Northern India announced that its member mills will grant three days' holiday (Wednesday, Thursday and Monday) and that the workers would get their wages, dearness allowance, etc., for this period. Almost all the big factories, buildings, etc., were decorated with flags of the Allied Nations. Two giant effigies of Hitler and Mussolini were burned. Temples, mosques, and other charitable institutions arranged for thanksgiving services, distribution of sweets to the children, feeding of the poor, etc.

South India

Expansion of Mysore Silk Industry

THE great expansion of the Mysore silk industry as a result of the war was pointed out by the Dewan of Mysore in his budget speech to the Representative Assembly which met at Bangalore on 1st June. He said: "The development of sericulture achieved under the stimulus of war-time conditions may well represent a permannt feature of the economy of the State. Necessary steps are being taken to consolidate the progress made and to place the industry on a sound basis."

The area under mulberry in Mysore State has risen from 39,000 acres on 1940-41 to 75,000 acres in 1944-45, and further expansion has been restricted in the interests of food production. The Government and aided grainages, the number of which has risen from 50 in 1940-41 to 106 in 1944-45 (besides 33 which are to be started shortly) supplied 143 lakhs of disease-free layings during the year. About 20 crores of seed cocoons were supplied during the year. The experiments made in the Biligiriranjan Hill rearing station have yielded satisfactory results and it is proposed to have two more hill rearing stations, one at Bedaguli in Chamrajnagar taluk and another at Kemmangandi. Proposals to open 49 cocoon markets in addition to the 51 existing markets are under consideration. The Silk Conditioning and Testing House has started operations at Channapatna.

The Board of Sericulture has drawn up a programme of sericultural development including the establishment of a sericultural school for giving a specialized training in the industry, the starting of a sericultural research institute and the formation of seedling nurseries.

Principal, Madras Textile Institute

The Madras Government have sanctioned the extension of the period of service of Mr. D. M. Amalsad as Principal of the Madras Government Textile Institute for one year from August, when he is due to retire.

Forcing Handloom Cloth on Buyers

The Additional Textile Commissioner in Mysore has issued a warning that numerous representations has been received that retailers, particularly in the mofussil parts, have been forcing handloom and power-loom cloth in excessive quantities upon their customers while selling mill-made cloth, that such insistence is irregular and that serious notice, such as suspension of licence, is liable to be taken summarily against the dealers concerned on receipt of complaints from parties.

Government Grant for Mulberry Cultivation

The Madras Government have directed that the scheme for the encouragement of mulberry cultivation in the Kollegal and Hosur taluks be continued for a further period of one year upto the end of the planting season in 1945. The provisions of the scheme will be applicable to the Gobichettipalayam taluk also during 1945-46. They have sanctioned an expenditure of Rs. 1,07,500 on the disbursement of loans to ryots during 1945-56 at Rs. 25 per acre of land newly cultivated with mulberry. The ryots will be entitled to remission of assessment for a period of three years on the area newly brought under mulberry cultivation during the planting season in 1945. The remission will be granted on application by the cultivators.

Industries in Travancore

The ceramic factory, mainly manufactured articles ordered by the Government of India Supply Department, says the 1944-45 Administration Report of the Department of Industries, Travancore. The factory produced 1,644 tons of china-clay, and the articles sold during the year were valued at Rs. 2,53,535 and china-clay was sold for Rs. 1,05,003. The various companies in the State, manufacturing plywood, matches, rubber, paper, sugar, aluminium, glass and fertilizers, continued to make good progress. At the close of the year, there were 92 aided and 60 unaided technical schools and 19 approved commercial schools.

Export of "Cumblies" to Ceylon

A *communique* issued by the Ceylon Government Representative in India says : " On receipt of a communication from the Government of Ceylon that export to Ceylon of woollen *cumblies* was prohibited by the Indian Government and that Ceylon was badly in need of these before the south-west monsoon rains started. The Special Representative of the Government of Ceylon took the matter up with the Commonwealth Relations Department of the Government of India. It was pressed on the Government of India that if woollen *cumblies* were not made available work on up-country tea estates would be adversely affected and production of tea, a war essential, would suffer. The Government of India viewed the matter with great sympathy and ordered the release of 40,000 woollen *cumblies* immediately and release of a further 40,000 has also since been sanctioned, making a total of 80,000 woollen *cumblies* for this year.

" The Ceylon Representative acknowledges with gratitude the sympathetic consideration given by the Government of India to his representations and the promptitude with which action was taken. "

Export of Handloom Cloth from Madras May be Permitted in Varieties

In reply to a representation made by the Andhra Chamber of Commerce requesting the Provincial Textile Commissioner, Madras, to allow export of handloom cloth manufactured and kept ready for despatch to customers in other Provinces and in Indian States, the Commissioner states that for various reasons it has been found necessary to restrict the export of handloom cloth to areas outside the Province. The restriction has been confined only to cloth in finer counts, *dhotis*, and *saris* in which there is scarcity in this Province at present. The Textile Commissioner has no objection to consider on merits individual applications for permits for export of cloth that has already been purchased and stocked in varieties that are not required for consumption in the Province.

Madras Raw Cotton Statistics

The receipt of loose cotton at presses and spinning mills in the Madras Province from 1st February to 20th April 1945 amounted to 100,130 bales of 400 lbs. lint. The receipts in the corresponding period of the previous year were 85,065 bales, 115,705 bales mainly of pressed cotton were received at spinning mills and 6,753 bales were exported by sea while 38,903 bales were imported by sea mainly from Bombay.

K. R. Mills Labour Dispute

The Mysore Government have referred the Krishnarajendra Mills labour dispute to a Court of Arbitration consisting of Rajadharmaprasakta T. Singaravelu Mudaliar (Chairman), Mr. K. C. Subbanna and Rao Bahadur M. Ramaswamy.

Calcutta

Import of Cloth in Bengal

A STRONG warning has been issued by the Bengal Civil Supplies Department to all dealers who, by their acts of omission or commission, are causing delay in the procurement and distribution of cloth. For over some weeks, says the Government *communique*, directions have been in force prescribing that dealers who receive cotton cloth by rail, river, steamer, or sea within the limits of Calcutta and industrial area shall sell and deliver that cloth to certain authorized dealers (at one time known as handling agents), the sale to be effected by handing over the railway receipt or bill of lading, duly endorsed, together with certain other documents.

Owing to holders of railway receipts and bills of lading not following the directions which are obligatory on them, the goods sheds at Shalimar and Howrah have become seriously congested. In consequence, Government have again had to resort to requisitioning the goods under Rule 75A of the Defence of India Rules in order to relieve the congestion and also to avoid delay in distribution to consumers.

Many trades organizations have severely criticized the system which has been adopted by Government and the Directorate of Textiles did undertake to consider alternative schemes which might enable the trade to retain its normal contacts to the maximum extent possible under the circumstances. It must be remembered, emphasizes the *communique* that Government were forced, by the non-co-operation of the trade in the working of the " quota-to-quota system " which was in vogue, to take the drastic action which they did.

Government are determined that cloth procurement and distribution in Bengal shall ensure quick and reasonable distribution to consumers of everything available and if the trade persists in efforts to frustrate this object Government will be forced to deprive even more sections of the trade from any participation in the handling of cloth.

Those concerned have, therefore, been officially warned that if they persist in failing promptly to import into Bengal cotton cloth which is due to them and/or if they do not hand over railway receipts and/or bills of lading promptly in accordance with official directions, the Textile Commissioner for India has authorized the Government of Bengal to state that the quota of those concerned will be cancelled immediately, and without question, and allotted to those who may be nominated by the Government of Bengal.

Licence in Textile Trade and Industry

A memorandum was submitted by the Indigenous Manufacturers' Association to the Director of Textiles, Government of Bengal, protesting against the recent Government notification levying licence fees on manufacturers and dealers of textile and hosiery goods including handloom and hand-spinning industries.

In the memorandum the Association not only lodged an emphatic protest against the proposed scheme as violating the fundamentals of taxation but also drew pointed attention to grave anomalies in it which were bound to have serious disruptive influences on the textile and hosiery industries, particularly those on a small and medium scale.

A deputation met Mr. C. A. Buxton, the Additional Director of Textiles, recently to have a threadbare discussion of the matter and to clearly comprehend the viewpoint of the Government. In the course of the interview, Mr. Buxton undertook to give consideration to various points put forward by the Association in connection with the new licensing.

The Association now understand that the Directorate of Textiles, Government of Bengal, have decided that a weaver on obtaining a licence under group " P " may (1) make handloom cloth, (2) dispose of this cloth by sale, (3) manufacture yarn by *charkas* and *taklies* where this is only a spare-time occupation.

Foreign Capital and India

The implications of the introduction of foreign capital for Indian industrial development are engaging the serious attention of the mercantile community. In a statement issued by the Indian Chamber of Commerce, grave concern has been expressed by the Chamber regarding the suggestions frequently appearing in the United Kingdom and elsewhere that foreign capital should participate in the control and direction of Indian industry. The object of industrial development is to improve the condition of the country in every sphere, and this end cannot be fulfilled if industry is controlled or managed by those who cannot devote themselves with a single mind to the country's welfare. It is axiomatic that non-Indian control is detrimental to the country's prosperity. In particular the retention of the provisions in the Government of India Act, 1935, against commercial and other discrimination has been proved harmful to the country's interests. These provisions need to be withdrawn immediately. If India is in need of capital from abroad, she should be at liberty to raise it on the most advantageous terms in any capital market without any condition in regard to foreign control or management. She can also recruit technical and expert personnel on her own terms. In regard to purchase of machinery and equipment she possesses ample resources in the sterling balances which she has built up at great sacrifice and which she should now be allowed freely to use. There is no need for foreign domination and it is essential that in the industrial development now being planned control and management should vest entirely with Indians.

The Chamber have seen reports to the effect that there are some proposals of collaboration between Indian and British business men and that the forthcoming invitation of industrialists is designed to further these schemes of collaboration. So far as the Chamber are aware from public statements about the objects of the Mission, its members are being sent entirely for purpose of investigation and study of industrial conditions and developments in the U. K. and U. S. A. during the war. These industrialists are going in their personal capacities and cannot commit the country or Indian commercial or industrial interests to any policy of collaboration or any scheme of participation of foreign capital in Indian industry. There is no need, says the Chamber, to invite foreign capital to develop existing industries, for which Indian capital is available in full measure, and as regards new industries, no arrangement should be countenanced which will place control and mangement in the hands of non-Indians.

Planning for Jute

An all-India jute target in the immediate future of 100 lakh bales in yield, or about 34 lakhs in acreage, was decided upon by the Planning Sub-Committee of the Indian Central Jute Committee. The Committee decided that the data available were insufficient to enable it to make long-term proposals, It therefore, confined its recommendations to a short-term five-year period commencing with the jute crop year 1946-47. The target of 100 lakh bales will be made up of 66 lakh bales for internal mill consumption, 6 lakh bales for internal village consumption and 28 lakh bales for exports.

The Sub-Committee agreed that the all-India target should be apportioned among the four provinces of Bengal, Bihar, Assam and Orissa on the basis for area and production during the last 15 years for which data were available. For Orissa this period is only nine years, as separate statistics for the province are not forthcoming for a longer period.

To ensure that the targets fixed may be achieved in practice, the Sub-Committee recommended immediate action on the following lines :—

1. Government should guarantee to producers an assured market and a remunerative and stable price.

2. Government should provide for the maintenance of buffer stocks in order to ensure stability of price, those stocks to be accumulated at times when prices reach a prescribed minimum level and it is necessary to support the market, to be released whenever the prices reach the prescribed maximum and stocks are in short supply.

3. A suitable marketing organization, co-operative or other, should be developed to provide for the sale of the produce and to ensure the maximum possible return to the producer.

4. Standards or grades should be prescribed for jute fibre and marketing should take place only in those standards of grades.

5. Where necessary Government should acquire legislative powers to apply compulsion in such matters as the establishment of regulated markets for jute, the adoption of standard grades, and contracts and the regulation of areas.

The Sub-Committee recognized that following the cessation of hostilities and with the gradual restoration of normal conditions both in enemy countries and in liberated territories, the present outlook may change appreciably. Consequently, any target fixed to-day may not prove suitable for so long a period as five years. It, therefore, considered it necessary to review annually the targets as now fixed, in the light of circumstances as they exist. The annual review should take place in Novemt er of each year so that the Indian Central Jute Committee's recommendations as to any changes considered desirable, either in the targets themselves or in the steps concerned, may be known well ahead of the sowing time annually.

The Sub-Committee recommended that the proposals be circulated immediately to the four provincial Governments concerned and that they be invited to intimate their acceptance of the recommendations as the Governments concerned considered desirable. The replies of the Provincial Governments would be considered at the next meeting of the Planning Sub-Committee.

It is intended to place the views of the Committee before the Government of India so that in drawing up a comprehensive plan for the production of all crops, the question of fitting in jute may be given the consideration it deserves.

Training Labour Welfare Officers

A social work course is to be made a permanent feature of the activities of the Calcutta University.

This decision was taken by the Senate when on the recommendation of the Syndicate it agreed to institute a Diploma in Social Work (Labour Welfare).

Calcutta University is the only centre in India which for the first time started such a course for the training of labour welfare officers as an experimental measure over two years ago.

Moving for adoption of the recommendation of the Syndicate, Dr. B. C. Roy said that it was at the instance of the Indian Jute Mills' Association that the Appointments Board organized a specialized training course for labour welfare officers employed by jute mills and other industrial concerns in December 1942. The working of the course had won recognition from all over India. The Government of India had made Calcutta University the only centre in India for the training of labour welfare officers. The University had also been approached by various industrial organizations outside Calcutta industrial area for accommodating their labour welfare officers.

It was not the intention of the University to throw this course open to everyone. Only those who were directly concerned with labour welfare work would be admitted to the course. The time had come when this should be placed on a permanent footing as a recognized activity of the University.

Industrial Employees' Treatment for Tuberculosis

A suggestion by the Director of Public Health, Bengal, for the introduction of rules, similar to those in respect of Government servants, for treatment of tubercular employees of industrial and commercial concerns at recognized tuberculosis hospitals is under consideration by the Bengal Chamber of Commerce. The Director has also sent to the Chamber a joint draft note on the subject by two tuberculosis experts together with a copy of Government rules.

Implementation of the rules requires provision for early diagnosis of the disease at recognized tuberculosis clinics or hospitals and treatment in tuberculosis hospitals and sanatoria for such cases as need them. As most of the employees are not in a position to afford the expenses of treatment in residential institutions, the Chamber may consider the feasibility of subsidizing a certain number of beds for the employees recommended by them. The capital cost involved in subsidizing a bed in a modern tuberculosis institution is about Rs. 3,000 per bed and the cost of treatment is Rs. 3 per bed per diem excluding the cost of X-ray films and special expensive medicines. Stressing the gravity of the tuberculosis menace in the country, it is pointed out that the incidence is rapidly increasing.

Removal of Controls Urged

A strong plea for immediate removal of war-time controls on Indian trade and industry in view of the end of the war in the West and the likely termination of the war in the East within a measurable period of time, is made by the Committee of the Indian Chamber of Commerce in a communication to the Government of India.

The Committee contends that the existing controls on trade and industry have not only bred bribery and corruption but jeopardized the smooth and effective working of normal trade channels, caused scarcity and suffering to the people and hampered the development of Indian trade and industry.

The Committee urges the Government of India to extend adequate and effective assistance to Indian industries to enable them to step up their production and augment the supply of consumer goods to civilians as was being done by the British and American Governments.

Control of Cloth and Yarn

By a notification in a *Calcutta Gazette Extraordinary* published on Saturday the 5th April, the Government of Bengal have promulgated the Bengal Cotton Cloth and Yarn Control Order, 1945, repealing the existing Order of 1943. The new Order which will extend to the whole of Bengal, except the Chittagong Hill Tracts, has brought all operations in the textile industry within its scope by including manufacture and sale of cloth by power-loom or handloom, of yarn and ready made garments as also hosiery goods.

"No person shall, after the commencement of this Order, engage in any undertaking which involves the manufacture, purchase, sale or storage for sale of cloth or yarn or both unless he holds a licence ; provided that persons who were licensed under the old Order or who are to be included in the new Order shall be allowed two months from such commencement to obtain a licence under this Order."

If the licensees carry on business in more than one place, a separate licence shall be taken for every such place of business. One of the most important clauses of the Order provides that where the maximum prices of any cloth or yarn have not been fixed under clause 10 of the Cotton Cloth and Yarn (Control) Order, 1943, the maximum prices at which such cloth or yarn may be sold shall be such as may be fixed by the Director-General and the maximum prices so fixed may be different for different classes of cloth and yarn and for different classes of dealers.

Tailors Idle for Want of Cloth

About 250,000 tailors in Calcutta and in the districts are now reported to be almost idle for want of cloth. It was stated that the present scarcity of cloth had created a twofold problem for tailors. They had not only to secure cloth to keep their trade going, but also to provide for the use of their own families. Failure on the part of the Government to find an immediate solution of the cloth problem would bring about total unemployment for men in the business who, with their dependants, numbering about 1,250,000, would have to starve. The Bengal Provincial Tailors Union has demanded a separate quota of cloth for the tailoring trade and its distribution through the union. It urged that the supply of cloth be increased by releasing the whole production of Indian mills for civilian consumption, military requirements being met from imported goods.

The need for a 20 per cent. rise in the wages of persons employed in tailoring establishments was also emphasized.

Hand-dyeing and Printing

Attention has been drawn to the grave anomaly of licensing the indigenous hand-dyers and printers according to the scheme recently envisaged by the Government of Bengal as per their notification in the *Calcutta Gazette* dated the 22nd March 1945, by the President, Indigenous Manufacturers' Association, in the course of a communication to the Director of Textiles, Bengal.

The industry of hand-dyeing and printing is only of indigenous growth in the province of Bengal and has far-reaching possibilities of improvement and expansion. There is a vast potential market for hand-dyed and printed textiles in this province.

The exigencies of a World War have necessarily entailed great hardships on cottage workers in this line. The industry is already severely handicapped on account of uncontrollable war complexes, such as dearth of cloth and dyeing and printing chemicals, high cost of labour, etc. It is stressed that at such a critical juncture the imposition of a heavy burden of taxation, as contemplated by the Government of Bengal cannot but have disastrous consequences on the very existence of this infant industry. The Association fails to understand why the Government includes the hand-dyers and printers within the purview of the proposed licensing scheme. Apart from the gross injustice of saddling this struggling industry with a load of taxation which it can ill afford to bear, the licensing scheme as outlined by the Government of Bengal contains glaring anomalies which definitely bring the trade to a standstill. Now, contends the Association, it is well known that a hand-dyer and printer is more often than not his own wholesaler or retailer. In this particular industry, as in most other cottage industries, the manufacturing or processing cannot be separated from marketing. They form just the indivisible whole. If the scheme is to be taken at its face value, the hand-dyer and printer cannot take out a licence for marketing his goods, which obviously leads to a deadlock that does not admit of any solution under the law. It is thus clear that the scheme, in so far as it relates to cottage dyeing and printing, will only serve to destroy the industry by landing it in a maze of inconsistencies. The President of the Association concludes with an appeal to revise the licensing scheme with a view to exclude cottage crafts like hand-dyeing and printing out of its scope, thus obviating some of the inconsistencies which it implies.

Length of a "Dhoti"

The Bengal Government sought public opinion on the suggestion of the Central Government for a reduction of Bengal's *dhoti* by one yard per pair from 10 yards to 9.

The recipients of the circular on this subject, issued by the Director-General of Enforcement and Public Relations, included members of the Bengal Legislature and Councillors of the Calcutta Corporation besides a considerable number of citizens of Calcutta. The Government proposed in this way to get the opinion of an important cross-section of the people of Bengal.

The Central Government having inquired whether the proposal for reduction with a view to ensure a corresponding increase in supply would be welcome to the people of Bengal, the circular was issued containing a single question whether the addressee was in favour of the reduction in order to make possible a corresponding increase in supply. The addressee was to answer the question by a simple "Yes" or "No" and was requested not to give his reasons.

It is learnt that of the 350 inquiries made, only about 100 replies had been received by the department by the date fixed by them. About 60 of them have expressed themselves in favour of reduction in the length of the *dhoti* and 35 against it.

On the basis of these replies the Bengal Government, it is stated, propose to decide in favour of reduction in the length of the *dhoti* by half a yard per piece and advise the Government of India accordingly.

Difficulties of Cloth Rationing

A Press Note issued by the Department of Civil Supplies, Bengal, says :—

"A statement has appeared in the Press as to the quantity of cloth likely to be available per head under the rationing scheme. That statement has no authority behind it.

"Government appreciate the anxiety of the public to know when rationing is to come and how much cloth everybody will get in the year. But it is not possible to give a definite answer until Government can know for certain the total quantity of cloth which will be available for distribution.

"The quantity of cloth for distribution depends upon a number of factors some of which are entirely beyond the control of the Bengal Government. For example, one of the principal such factors is the speed at which textiles arrive here. Arrivals up to date have not been as large as they should have been; it must also be remembered that cloth available in Bengal for ultimate distribution includes a very large quantity of handloom cloth. This cloth is produced not in a few controlled centres but by many thousands of handloom weavers. It is hoped to take all this handloom cloth under control, but this is clearly a difficult process which cannot be accomplished in a few days.

"Government wish to impress the fact that all efforts are being made to get Bengal's due share of cloth, to unearth hoarded stocks and to expedite the consolidation of stocks as much as possible. While this is being done, Government aims to get something to everybody as quickly as possible.

"It may also be emphasized that except for the minimum entries necessary for proper check upon cloth till it reaches the consumer, no red-tapism is allowed to hamper the distribution of cloth and it is hoped that with the provision of clerical assistance, the ward committees' work will be speeded up and will give substantial relief to the public, beginning selectively with those first whose need is greatest."

Interim Cloth Rationing in Calcutta

A provisional list of 225 shops have been selected for distribution of cloth in Calcutta on an interim ration basis and Civil Supplies Committees have been formed in all the municipal wards of Calcutta, according to the time scheduled by the Director-General of Enforcement.

When full rationing comes into force, it is not proposed to limit the number of shops to a particular figure and the general intention is to recognize at that stage all well-established *bona fide* cloth shops.

Two thousand bales of cloth will be distributed during the interim period through the shops selected. In the course of a statement on interim rationing the Director-General of Enforcement explained the interim cloth distribution scheme and said that such a scheme must clearly be based on the principle of giving priority to those whose need was greatest and Government were at once up against the practical problem as to how such priorities could be determined. To arrive at them through some official mechanism would have been extremely difficult if not impossible—a whole army of minor officials would have been required and the work might well have taken some time. It seemed clear, therefore, that in Calcutta the solution must consist in asking for the help of the public. He explained that any cloth which an individual was allowed to buy during the operation of the rationing scheme, must, of course, come off his ration when full rationing came into force, and for this reason accurate and somewhat complicated records have to be kept for the selected shops. The shops had, therefore, to be instructed regarding the keeping of accounts and this is a process requiring a little time. The Director-General of Consumer Goods and his staff, therefore, selected about a third of the 225 shops selected, and instructed those shop-keepers in the necessary procedure.

Distribution of Rationed Cloth

Issue of a licence under the Bengal Cotton Cloth and Yarn Control Order, 1943, will not entitle a cloth dealer to be assisted in any way by Government in participating in the distribution of the rationed cloth, states a communication addressed to the Bengal National Chamber of Commerce by the Civil Supplies Department, Government of Bengal.

The Chamber questioned the justification of Government's action in realizing fees from the cloth dealers by asking them to renew their licences at a time when the Government have decided to ration cloth. It pointed out that realization of the licence fee would prove an additional taxation upon the cloth dealers, most of whom would have no place in the scheme for distribution of rationed cloth.

In reply, it is stated in the communication, that Government considered that the renewal fees of the various licences issued under the Bengal Cotton Cloth and Yarn Control Order were justified in view of the cost of the control. Further the Government had made it clear, as stated above, that the issue of the licence did not entitle the licensee to be assisted in any way in participating in the distribution of the rationed cloth.

Khaddar in Cloth Crisis

Explaining the scarcity of khaddar and the abnormal rise in its price the Secretary of the Bengal Branch of the All-India Spinners' Association states that it is a fact that demand for *khadi* has suddenly been very high, due to present cloth crisis. It may be pointed out that this demand is not normal. As regards non-availability of *khadi* in India, specially in Bengal, supply has dwindled during the last three years.

In 1942, the Government of Bengal closed down almost all the centres of the A.I.S.A. and other certified parties. Of the 30 centres of the A. I. S. A. alone, as many as 28 were sealed. Most of them are still closed. Although the stocks and furniture of some of them have no doubt been returned, the order by which the Provincial Government declared some of the centres illegal, has not yet been withdrawn. The result is that though there is enough scope for the increase of production, it cannot be utilized. In 1941-42 Bengal produced 897,080 sq. yds. as against India's output of 16,007,829 sq. yds. In 1942-43, the corresponding figures were 86,582 and 10,045,214 sq. yds. respectively. In 1943-44, Bengal's production was 328,610 sq. yds. compared to an all-India output of 11,153,755 sq. yds.

A glance at the production table of Bengal and India, continues the Secretary, would show that Bengal falls far behind the figures reached prior to the closing down of the centres by the Government. Suffice it to say that though production of khaddar decreased by 22 per cent. in Andhra, 70 per cent. in Behar, 50 per cent. in Gujrat, 12 per cent. in Tamilnad, 70 per cent. in U.P. and 90 per cent. in Bengal during 1942-43, the total decrease in all-India production was not more than 30 per cent. Cause of this anomaly is to be found in the fact that production increased in some provinces like Utkal, Karnatak and Keral, etc., where the A. I. S. A. functioned. It is emphasized that transport difficulties have been hampering production to a very great extent. As regards the price of genuine khaddar produced by the A. I. S. A. and certified organizations, it has not increased so much as spurious things and mill-made articles. All-India Spinners' Association, it is claimed, does not work from any profit motive. Its main principle is to give living wage to the artisans engaged in production of *khadi*. As the cost of necessities of life has become unusually high, the wages of the spinners and weavers had to be doubled and in some cases, trebled. Cotton price has also doubled itself. Under the circumstances, it is contended there was no other alternative than to increase the price of *khadi* by 100 per cent. only as compared to pre-war rates, while cost of living index has gone up by 245 per cent. and price of mill-made and handloom cloth have increased four or five times. But the difficulty is that there are many profit-mongers and uncertified dealers who charge sky-high prices for their products. They do not give proper wages to the spinners and weavers and thus exploit the producers and the consumers alike. The innocent public become a prey to these profiteers, it is emphasized, and blame the *khadi* organizations as a whole.

Khaddar and Yarn Control Order

Exception has been taken to khaddar-producing organizations being brought under the operation of the Cotton and Yarn Control Order, 1945, and to their being required to secure licence on payment of the requisite fee. This action of the Textile authorities is considered to be ill advised and will be a great handicap to the production of *khadi* in the large number of centres in the country-side. In these days of acute cloth scarcity, it is argued, *khadi* has to some extent become the stand-by of the semi-naked people who can procure no mill cloth either for love or for money. *Charkha* has also been a source of income to a large number of people in the rural areas. *Khadi* producers cannot be branded as black-marketers and profiteers. There is, therefore, absolutely no justification for bringing *khadi* within the operation of the Order. It is suggested that the Provincial Textile authorities should immediately withdraw the Order from *khadi* and thereby encourage the production of this variety of clothing which would meet the scarcity of cloth in however fractional measure.

Cloth Production in Bengal

In an address before the Calcutta Rotary Club, Mr. S. K. Bose, Managing Director of the Dhakeswari Cotton Mills, made an interesting review of the present position of cloth production in Bengal, with all its attendant difficulties. He said that there were now 32 cotton mills in Bengal which met about 25 per cent. of the requirements of the Province in normal times. There were now about 9,000 looms working in different cotton mills in Bengal and most of them worked in double shifts. About 50 per cent. of the total production went against Government orders for military and standard cloth which explained the acute shortage of cloth in Bengal. He added that mills in India now produced about 4,500 million yards of cloth per annum. Of these, nearly 1,400 million yards were allocated for the Supply Department and export and 2,000 million yards had been set apart for standard cloth. Therefore there was for other purposes a balance of only about 1,000 million yards which meant 3 yards only per head of the population.

Dealing with the position of handlooms, he observed that it was estimated that Bengal had now about 200,000 handlooms of which about 40,000 were in the district of Dacca. In normal times all these handloom productions supplied about 25 per cent. of clothing requirements of Bengal. But owing to introduction of the Cotton Cloth and Yarn Control Order of 1943 by the Government of India import of yarn from other provinces had been drastically restricted. For want of yarn handlooms weavers in Bengal were idle for about 20 days in a month which had necessarily brought in a very critical economic situation.

Referring to the hindrances and handicaps placed before the cotton mills by the Government he said that apart from these handicaps the Government of India had undertaken the responsibility of supplying various materials which no cotton mill or merchant could buy without permit from the Government. Government were not able to supply these materials in adequate quantities. In addition, there were the difficulties in the supply of coal, as also an inordinate delay on the part of the Government in not taking over the goods made against Government orders. Concluding Mr. Bose emphasized that if mills were penalized for not delivering the goods in time, why Government should not be held accountable for their defaults ?

Textile Dealers' Complaints

An informal meeting of Bengal millowners and quota-holders was held at which Mr. W. Q. C. Tully, Director-General of Consumer Goods, Bengal, and Mr. G. N. K. Iyer, Assistant Textile Commissioner, Government of India, were present.

Both Mr. Tully and Mr. Iyer listened to the complaints voiced by the quota-holders and the millowners and promised in certain cases to find remedy as far as possible.

A committee, consisting of four representatives of the quota-holders, one from the yarn merchants and four from the millowners was formed to go into all disputes between the quota-holders and the millowners. The committee will settle these disputes as far as possible within the framework of the Textile Control Order.

At the conclusion of the meeting, wholesale dealers, who were present in large numbers, pointed out that the Government scheme of taking physical possession of all cloth through the handling agents would be harmful to their interest and create unemployment.

High Court Judgment on Sealing of Cloth Godowns

In delivering judgment in the application made before the Calcutta High Court challenging the legality of the directions given by the Additional Director of Textiles, Bengal, *inter alia* for the sealing of places of cotton cloths, seizure of textile goods and for making over those goods to the four respondents, who were called handling agents, the Chief Justice in his judgment *inter alia* said that the matter arose out of certain proceedings taken by the Government of Bengal for the purpose of ensuring a better distribution of cloth in the province. It was common ground that for some time previous to March 1945, there had been an uneven distribution of cloth in the form of *dhotis* and *saris* in the province. Certain districts were without adequate supplies of cloth and it was believed that clothing sufficient for such deficiencies temporarily existed in certain other parts of the province. The Government alleged that the maldistribution was due to hoarding of cloth by certain persons and firms and the dealers alleged that such maldistribution was due to Government interference with ordinary trading operations. Whatever the cause, His Lordship observed, it was notorious that there was maldistribution of cloth in the province.

His Lordship observed that the question substantially dealt with before the court was whether the Government had had power to issue the directions having regard to the provisions of the Government of India Act. The manufacture, distribution and sale of cloth had been controlled in one manner or another since 17th June 1943, under the provision of rule 81 of the Defence of India Rules, made pursuant to section 2 (2) of the Defence of India Act, when the (All-India) Cotton Cloth and Yarn Control Order, 1943, was made. After referring to the amendments of the Order from time to time His Lordship said that on 19th October 1943 the Government of Bengal in exercise of the power conferred by sub-rule (2) of rule 81 of the Defence of India Rules, made the Bengal Cotton Cloth and Yarn Control Order, 1943.

The applicant's contention was to the effect that the directions requiring him to hand over the cloth to the handling agents was *ultra vires*. As regards the contention that the legislature had no power to requisition movable property, in His Lordship's view, Government had such power to requisition movable property under the Act of 1935. However, the procedure in this case was not a requisitioning of the applicant's cloth ; it was probable that if the applicant did not dispose of his cloth as directed by the Additional Director of Textiles, his cloth would be requisitioned but that stage had not been reached. The direction was to hand over the cloth to one of the handling firms when it would be paid for in accordance with the price fixed in the directions.

His Lordship observed that the direction in question was given under paragraph 5 of the conditions of the licence. The Bengal Cotton Cloth and Yarn Control Order, under which the licence was given was made by the Government consequent upon the following provisions of law. Under Article 27 of List 2 of Schedule VII of the Government of India Act, the Provincial Government had power to legislate for trade and commerce and under Article 29 for the supply and distribution of goods. These powers to legislate were given to the Government of India under section 102 of the Act, consequent upon the emergency proclamation of 3rd September 1939.

Section 2 (2) (20) of the Defence of India Act gave authority to the Central Government to make rules relating to the distribution and sale of essential goods. Rule 81 was such rule. In His Lordship's opinion the Bengal Cotton Cloth and Yarn Control Order made by the Government of Bengal on 19th October 1943, came within the terms and powers of rule (2) (*a*) and (*b*) of the Defence of India Rules. The direction given was entirely within the power given in rule 81 (2) (*a*) and (*b*) and was in accordance with condition 5 of the licence which was set out in the Bengal Cotton Cloth and Yarn Control Order. If the applicant handed over his cloth there was a sale and the price of rate specified in the direction was to be paid for the cloth so handed over as soon as the price was ascertained. The price fixed was one which the Bengal Government through its authorized officer was entitled to fix.

One of the objects of controlling the price was to prevent people selling at prices higher than were deemed fair and proper by the appropriate authority. The applicant had not been deprived of his cloth otherwise than according to law and he was directed to hand it over in accordance with law. He would get the price that had been fixed as fair and proper according to law. That this might be less than the price he paid was no objection to the Control Order.

In His Lordship's opinion the order in question and the procedure of the Government of Bengal in this case were according to law and His Lordship saw no reason to interfere with the order that had been made.

Study of Jute Fibre

Interesting results of a study to determine what connection exists between spinning quality and chemical composition of jute fibre, undertaken by the Technological Research Laboratories of the Indian Central Jute Committee are revealed in the Technological Research Memoir No. 6 of the Committee, recently released. They indicate that chemical analytical data may be of use, in combination with physical measurements of the fibre, in assessing the fibre quality of jute. The importance of this lies in the possibility of assessing spinning quality by an examination of quite small samples, which is extremely useful in connection with breeding trials and agricultural experiments generally.

Trade Disputes Assessors to be Appointed

The Bengal Government propose, as an experimental measure, to appoint assessors to advise the adjudicator of trade disputes on technical matters. They will be selected for each case by the Government from panels of employers and workers to be constituted for different industries.

Jute and Jute Manufacturers

The total reported production of jute goods manufactured on civil and military accounts during May 1945 amounts to 88,704 tons ; an increase of 9,281 tons over the preceding month. Goods manufactured on military account amount to 13,478 tons or 15.2 per cent. of the total productions ; this represents an increase of 4,483 tons on the corresponding production figure for April 1945. The production of manufactured goods of all descriptions during the period July 1944 to May 1945, now totals 905,628 tons giving a monthly average during the current season of 82,330 tons. In May 1945, the production of hessian was 14¼ crore yards, equalling 37,353 tons, of which 165¼ lakhs yards or 4,935 tons was on military account. For the same period, the production of sacking amounted to about 11¼ crores yards or 47,954 tons of which about 1¾ crore yards or 8,167 tons was on military account. Other manufactures which are unspecified accounted for 3,021 tons and 376 tons for civil and military accounts respectively. The increase in the tonnage produced last month is shared almost equally between hessian and sacking. There is a notable increase in the yardage of hessian produced last month on military account—165½ lakh yards—being more than double the yardage woven on military account during April 1945. The improvement in the total production for May represents an increase of 11.7 per cent. on the April figure and no doubt reflects the corresponding improvement in coal supplies noticeable recently. Mills, however, are still handicapped by shortage of labour.

Indian Mill Finance

Working of Textile Companies

Dhanalakshmi Mills, Ltd., Tirupur

(Agents: M. Nanjappa Chettiar and Sons)

After deducting all expenses and providing Rs. 81,000 for depreciation, the working of the company for the year ended 31st December 1944 has resulted in a net profit of Rs. 26,82,318-7-6. With Rs. 12,894-3-8, the balance of last year's profit, there is a balance of profit of Rs. 26,95,212-11-2 which the directors recommend to dispose of as follows:—For general reserve (to meet excess profit tax compulsory deposit) Rs. 4,90,000; provision for income-tax and excess profit tax Rs. 20,70,000; to pay a tax-free dividend of 16 per cent. Rs. 1,29,856; to carry forward the balance to next year Rs. 5,356-11-2.

New Victoria Mills Co., Ltd., Cawnpore

(Agents: J. P. Srivastava and Sons Ltd.)

The working of the company for the year ended 31st October 1944 shows a profit of Rs. 45,81,757-5-6 (including a carry forward of Rs. 5,37,221-8-6), from which has to be deducted on account of depreciation, Rs. 1,96,137-11, bonus to workers and staff for 1943, Rs. 43,596-1-3, directors' and secretaries' commission, Rs. 5,10,720, leaving at credit of profit and loss account a sum of Rs. 38,31,303-9-3 which the directors recommend be disposed of as under:—In payment of a dividend at 6 per cent. on preference capital Rs. 1,56,330; in payment of As. 2 per share dividend on ordinary shares Rs. 1,14,494-2; in provision of E.P.T. and income-tax Rs. 30,89,667; bonus to workers and staff for 1944, Rs. 4,00,000 and carry forward Rs. 70,812-7-3.

Finlay Mills Ltd., Bombay

(Agents: James Finlay & Co., Ltd.)

The working of the company for the year ended 31st December, 1944 shows a trading profit of Rs. 61,75,097 from which have been deducted provision for income-tax, corporation tax and excess profits tax of Rs. 45,25,000 and a reserve fund (estimated compulsory E.P.T. deposit) of Rs. 10,46,000; adding to the balance of Rs. 6,04,097 the amount carried forward from previous year of Rs. 81,585 a sum of Rs. 6,85,682 is available for disposal, from which it is proposed to pay a dividend of Rs. 15 per share on 40,000 shares (free of tax) Rs. 6,00,000 and to carry forward the balance of Rs. 85,682.

The whole of the company's property has been insured against fire for Rs. 1,81,33,100, and the profits and standing charges have been insured for Rs. 1,74,00,000, covering indemnity for 36 months. The property is also covered against riots and civil commotions fire risks. Stocks have been covered by Government War Risks Insurance, also buildings and machinery.

Swan Mills Ltd., Bombay

(Agents: James Finlay & Co., Ltd.)

The working of the company for the year ended 31st December 1944 shows a trading profit of Rs. 35,80,177 from which have been deducted provision for income-tax, corporation tax and excess profits tax of Rs. 24,84,000 and a reserve fund (estimated compulsory E.P.T. deposit) of Rs. 5,55,000, leaving a balance of Rs. 5,41,177. Adding thereto the amount carried forward from the previous year of Rs. 9,978 a sum of Rs. 5,51,155 is available for disposal. From this it is proposed to pay a dividend of Rs. 20 per share on 24,000 shares (free of tax) which will take up Rs. 4,80,000 and to carry forward the balance of Rs. 71,155.

The whole of the company's property has been insured against fire for Rs. 1,48,34,350, and the profits and standing charges have been insured for Rs. 1,41,00,000, covering indemnity for 36 months. The property is also covered against riots and civil commotions fire risks. Stocks have been covered by Government war risks insurance, also buildings and machinery.

Vikram Mills, Ltd., Ahmedabad

(Agents: Ramanlal Lallubhai Ltd.)

During the year ended 31st December 1944 this company has made a profit of Rs. 22,80,507-0-7 and with an addition of Rs. 5,363-15-7 being the balance of last year, the total comes to Rs. 22,85,871-0-2. Out of this amount Rs. 1,09,236 are to be paid to the Research Institute for Textile Technology Fund leaving a balance of Rs. 21,76,635-0-2 which the directors recommend to be distributed as under:—To machinery and building depreciation Rs. 1,50,000; to payment of dividend at Rs. 5 per share on preference shares for the year 1944 Rs. 25,000; to payment of dividend at Rs. 25 per ordinary share for the year 1944 Rs. 1,25,000; to carry to reserve fund Rs. 11,000; to carry to insurance fund Rs. 10,000; to income-tax, supertax, excess profits tax and excess profits tax deposit Rs. 18,50,000; and to carry forward to the next year's account Rs. 5,635-0-2.

During the year some necessary parts of the turbine were received and have been erected, but still some parts are to be received.

The company's buildings, machineries, cloth, cotton and stores, etc., are insured. The insurance for workmen's compensation, all riot and civil commotion and war risks is also effected.

Phoenix Mills, Ltd., Bombay

(Agents: Ramnarain Harnandrai and Sons)

The result of the working for the year ended 31st December 1944 shows a profit of Rs. 57,56,429-14-10 to which has to be added the sum of Rs. 4,04,520-1-10 being the amount brought forward from last year's account, making a total of Rs. 61,60,950-0-8, which the directors recommend, may be dealt with as under:—To dividend at the rate of Rs. 30 per share free of income-tax, for the year, Rs. 2,40,000; to equalization of dividend fund, Rs. 3,00,000; to depreciation on buildings, Rs. 60,000; on machinery, Rs. 2,00,000; on electric equipment, Rs. 10,000; on electric light installation, Rs. 5,000; on motor car and lorry, Rs. 1,000; to provision for taxation and compulsory E.P.T. deposit, Rs. 52,00,000 and to amount carried forward to next year's account Rs. 1,44,950-0-8.

During the year under report, three cheese winding machines and six cards have been purchased and installed.

The mill buildings with machinery and stocks of cotton, yarn, and cloth, etc., are insured against fire and riot risks to the extent of Rs. 1,14,63,700. Stocks have been insured against war risk for Rs. 75,00,000. The mill buildings and machinery have also been insured against war risk under the Factories Insurance Scheme for Rs. 36,11,000.

The profit and standing charges of the company have been insured for Rs. 40,00,000.

New Commercial Mills Co., Ltd., Ahmedabad

(Agents: Tricumlal Bhogilal & Co.)

The working of the company for the year ended 31st December 1944 shows a profit of Rs. 44,91,836-13-6 to which is added the amount brought forward from the account of the previous year of Rs. 2,918-10-6 making a total of Rs. 44,94,755-8. From this is deducted the amount debited on account towards contribution to Research Institute for Textile Technology of Rs. 1,50,000 leaving a balance of Rs. 43,44,755-8 which the directors recommend to be allocated as under:—Dividend at the rate of 5 per cent. on preference shares for the year 1944, Rs. 26,250; dividend at the rate of Rs. 40 per share on ordinary shares for the year 1944, Rs. 2,10,000; to carry to machinery and building depreciation account, Rs. 2,50,000; to carry to income-tax, super-tax and excess profits tax provision and deposit fund, Rs. 38,50,000; to carry to charity account, Rs. 5,000 and to be carried forward to next year's account, Rs. 3,505-8.

The property, profits, and standing charges and war risk of the company are insured. The mills are equipped with 33,524 spindles and 792 looms with necessary dyeing and bleaching plants and a printing plant.

Standard Mills Co., Ltd., Bombay

(Agents: Mafatlal Gagalbhai and Sons)

The working of the company for the year ended 31st December 1944 shows a profit of Rs. 1,00,53,736 after deducting the Agents' commission of Rs. 4,59,125 and remuneration of Rs. 30,000.

Out of the profits the directors recommend that appropriations be made as under:—Rs. 24,000 for payment of dividend of Rs. 4 per share free of income-tax, on 6,000 4 per cent. cumulative redeemable first preference shares, Rs. 24,000 for payment of dividend of Rs. 4 per share free of income-tax on 6,000 4 per cent. cumulative redeemable second preference shares; Rs. 6,00,000 for payment of dividend at the rate of Rs. 25 per share free of income-tax, on 24,000 ordinary shares; Rs. 1,50,000 to be transferred to depreciation fund; Rs. 75,00,000 for provision for income-tax, corporation-tax and excess profits tax; Rs. 17,00,000 to be transferred to the reserve fund, leaving a balance of Rs. 55,736 to be carried forward to next year's account.

The mills worked by day and night shifts during the year under report, excepting the dyeing department which worked by night shift from July to December 1944.

The mill buildings, machinery, stocks and stocks-in-process are insured against fire, riot and civil commotion risks for Rs. 2,43,89,000. The profits and fixed charges are also insured for Rs. 1,20,00,000, for two years. The buildings and machinery are insured against war risks for Rs. 71,36,800 and stocks and stocks-in-process are also insured for Rs. 75,00,000.

Malabar Spinning and Weaving Co., Ltd., Calicut

(Directors: A. K. T. K. M. Gupthan Namboodripad and others)

The working of the company for the year ended 31st December 1944 shows a net profit after providing for depreciation on the written down value of the buildings, machinery, furniture, etc., and paying all other expenses including income-tax of Rs. 9,461-12 paid in excess of the amount reserved of Rs. 5,95,086-8-11. Adding to this Rs. 8,608-13 brought forward from the last account, a sum of Rs. 6,03,695-5-11 is available, which the directors propose to dispose of as follows:—To reserve for taxation Rs. 4,80,000; to transfer to reserve fund Rs. 15,000; to transfer to dividend equalization fund Rs. 25,000; to pay to the shareholders a dividend of Rs. 25 per share, i.e., 12½ per cent. free of income-tax Rs. 75,000 and to carry forward to the next year Rs. 8,695-5-11.

The directors propose to pay to the staff and mill workers three months' salary and wages as bonus.

Dawn Mills Company, Ltd., Bombay

(Agents : Sassoon J. David & Co., Ltd.)

After making the necessary provisions of Rs. 19,00,000 for excess profits tax, income-tax and corporation tax, and compulsory deposit as per Excess Profits Tax Ordinance of the Government of India, the balance of profit for the year ending 31st December 1944 is Rs. 3,19,791-12-4 to which has to be added Rs. 1,63,230-6-7 brought forward from last year's account, making a total of Rs. 4,83,022-2-11 available for disposal, which the Directors recommend may be dealt with as under:—To depreciation on buildings Rs. 25,000 and on machinery Rs. 1,60,000; to dividend at the rate of Rs. 75 per share on 3,200 shares, free of income tax, for the year Rs. 2,40,000 and amount carried forward to next year's account Rs. 58,022-2-11.

A compulsory deposit of Rs. 4,06,119 for the year 1943 has been made to the Government of India during the current year.

The mill buildings with the machinery and stocks of cotton, yarn, stores, etc., are insured against fire to the extent of Rs. 70,68,600 and against riot and civil commotion risks to the extent of Rs. 69,94,700. Under the Government of India scheme stock and stock-in-process have been insured against War Risks (Goods) Insurance Ordinance, 1940 for Rs. 24,65,600. The mill buildings and machinery, etc., and boundary walls and coal have also been insured against War Risks (Factories) Insurance Ordinance, 1942 for Rs. 32,95,000.

The profits and standing charges of the company have been insured for Rs, 51,00,000 to cover a maximum stoppage of 24 months, such insurance to run from the 21st of January 1945 to 21st January 1946.

NEWS OF THE MONTH

Indian

Private Trade with Africa.—Persons and concerns in India are now permitted to carry on private trade with the French and Italian territories in Africa, subject to the existing export, import and exchange control regulations, says a Press note from the Director of Information, Bombay.

Bombay Working Class Cost of Living Index.—During April, the working class cost of living index number for Bombay, with the average prices for the year ended June 1934, equal to 100, was 226. This was one point higher than in the preceding month. The index number for food articles advanced by two points to 255.

Indian Industrialists Leav eEngland.—The Indian industrialists and their advisers who were touring England left London on the 22nd inst. for the United States. Mr. J. R. D. Tata, Mir Laik Ali, Sir Sultan Chinoy and Mr. A. D. Shroff are travelling by air, and Mr. G. D. Birla, Mr. N. R. Sarker, Mr. Ajaib Singh and Dr. Lokanathan by sea.

India's Contribution to U.N.R.R.A.—The U.N.R.R.A. Director-General at Washington, Mr. Herbert Lehman, announced that the Government of India, with the approval of the Legislature, have agreed to contribute more than Rs. 8,00,00,000 to the U.N.R.R.A. Notice of this was given to the U.N.R.R.A. in Washington by Sir G. S. Bajpai, Agent General for India.

Warning Against Strikes.—An amendment has been gazetted to the order of the Labour Department of the Government of India dated 21st August 1942. It says that no person shall instigate or incite others to take part in, or otherwise act in furtherance of, any strike or lockout which is, or, when commenced, will be, in contravention of the provisions of this order.

Price of Indian Sandbags in U.S.A.—The U.S. Office of Price Administration, Washington, established ceiling prices on 16th May for domestic sales of new military sandbags and burlap sheets exported to the U.S. from India. Prices range from 6.30 to 6.85 cents f.o.b. at a U.S. port.

The Foreign Economic Administration has arranged with the Government of India to purchase 30,000,000 surplus sandbags by U.S. importers.

Textile Calendar

MAY

28th, Monday :
Standard Mills Co., Ltd., Bombay, Ordinary General Meeting.

JUNE

9th, and 10th, Saturday and Sunday :
Bombay Presidency Handloom Weavers' Conference at Sholapur, Mr. N. M. Joshi presiding.

14th, Thursday :
Textile Association (India), Monthly Social at the Podar College of Commerce, Matunga. Mr. S. S. Warty, B.Sc. (Tech.), will read his prize essay on "Future of Technical Education."

21st, Thursday :
Association of Indian Industries, Tenth Annual General Meeting at Taj Mahal Hotel, Bombay.

28th, Thursday :
Textile Association (India), Sixth Annual General Meeting at Vanamali Hall, Dadar; also a special meeting to congratulate Mr. Nandulal M. Mehta on his being appointed as Secretary, Post-war Planning Committee (Textile), Government of India.

30th, Saturday :
Extraordinary General Meeting of the Bombay Yarn Exchange Ltd., Bombay.

JULY

5th, and 6th, Tuesday and Wednesday :
Inaugural meeting of the Handloom Control Board, Nagpur, the Hon. Sir Azizul Haque presiding.

India's Chemical Industries : Delegation to England and U.S.A.—The Government of India have agreed to give facilities to the Indian Chemical Manufacturers' Association to send a delegation to the United Kingdom and the United States of America with a view to studying the latest developments in the chemical industries in those countries, it is learnt here.

The delegation, which will consist of about 10 representatives of prominent chemical concerns in India, is expected to leave for the United Kingdom in August next.

Indo-British Commercial Corporation.—It is reported that an Indo-British Commercial Corporation with a capital of £50,000 contributed equally by Britons and Indians and with equal representation on the Board of Directors, is to be formed within the next few weeks.

Doctor R. C. Rawlley, Chairman of the Indian Vegetable Oils and Manufacturing Company Limited, who is now in London, is responsible for the negotiations being conducted there with the British industrial textile and financial heads.

The Corporation will have its offices in London and either Delhi or Lahore. There will be interchange of directors each year between the London and Indian head offices. It is proposed that through the Corporation, Britain will receive Indian manufactures and produce and that India will get British heavy machinery, cotton and rayon threads and worsteds. Doctor Rawlley will be the first Indian Chairman.

Association of Newly Started Textile Mills.—The textile mills in India, which were started or revived after 1942, have formed themselves into an associations with a view to getting their grievances, redressed.

The total number of such newly started or revived spinning mills in the country which are known is 11, 6 of which have already enrolled themselves as members of the Association. The office of the Association is located in Poona, with Mr. P. K. Divekar, of the Madhav Nagar Cotton Mills, as president, and Mr. A. R. Bhat as secretary.

According to the Association, while the production of such textile mills is governed, like the older mills, by the Cotton Cloth and Yarn Control Order of 1943, the new mills have been denied the quota of essential materials on the plea that they were not in existence in the basic years ended with 1942, and this denial, in the view of the Association, has hit the mills very severely.

All-India Jute Target Fixed.—An all-India jute target in the immediate future of 100,000,000 bales in yield, or about 34,000,000 in acreage was decided upon by the planning sub-committee of the Indian Central Jute Committee at a recent meeting.

The Committee decided that the data available was insufficient to enable it to make long-term proposals. It, therefore, confined its recommendations to a short-term five-year period commencing with the jute crop year 1946-47.

The target of 100,000,000 bales will be made up of 66,000,000 bales for internal mill consumption, 6,000,000 bales for internal village consumption and 28,000,000 bales for exports.

The sub-committee agreed that the all-India target should be apportioned among the four provinces of Bengal, Bihar, Assam and Orissa on the basis of area and production during the last 15 years for which data were available. For Orissa, this period is only nine years, as separate statistics for the province are not forthcoming for a longer period.

Tatas to Build Locomotives : Government Hand Over E.I.R. Workshops.—The E. I. Railway Workshops at Singhbhum were transferred on the 1st instant from the Indian State Railways to Tatas for the manufacture of boilers and locomotives. This is described as a landmark in the history not only of the Indian railways, but of Indian industry, and the beginning of a planned enterprise on a commercial scale for establishing, in the country, an industry to which Indian public opinion has attached great importance.

The first boilers are expected to come out of the Singhbhum Workshops by the end of the year. The manufacture of boilers is to be followed as soon as possible by the manufacture of locomotives. Government will buy a guaranteed number of boilers and locomotives from Tatas, and if the company is able to produce more, Government will purchase such additional production in preference to imports.

Government are obtaining for the project more than Rs. 30,00,000 worth of machinery, most of it from the United Kingdom, on very high priorities.

Bombay Labour Gazette News.—*Cotton Mill Production.*—During January 1945, cotton mills in Bombay City produced 43,586,000 lbs. of yarn and 38,305,000 lbs. of woven goods and those in Ahmedabad produced 17,928,000 lbs. of yarn and 20,885,000 lbs. of woven goods. The total production of cotton yarn and piecegoods for the whole of the Province amounted to 70,425,000 lbs. and 66,445,000 lbs. respectively.

Industrial Disputes.—There were twenty-one industrial disputes in the month of February 1945, involving 17,570 work-people, and a time-loss of 33,147 working days.

Night Shifts in Cotton Mills in the Province.—At the beginning of March 1945, there were 64 mills in Bombay City and 64 in Ahmedabad working night shifts. The numbers of men doing night work were 82,152 and 46,793 respectively.

Textile Research: Co-ordination Body Set Up.—A Textile Research Co-ordination Committee has been set up by the Government of Bombay, says the Director of Information, Bombay, in a Press Note. Its function is to consider the organization of a co-ordinated research plan and report to the Government how the textile research work at the Technological Laboratory, the Victoria Jubilee Technical Institute and the Department of Chemical Technology, as also at the mills already engaged or willing to participate in research, can be co-ordinated.

Planned research is of vital importance to the textile industry in India, as its further development will depend on the concerted effort made by scientists, technologists and manufacturers to solve the many problems that confront the industry.

The following will comprise the Committee: Mr. M. P. Kanga, Director of Industries, (Chairman); Dr. Nazir Ahmad, Mr. P. N. Joshi, Sir Sohrab Saklatvala, Mr. Kantilal C. Munshaw, Dr. K. Venkatraman, Mr. Haridas Madhavdas and Mr. S. D. Vashist, Deputy Director of Industries (Secretary).

New Cotton Mills for Bengal: Mr. N. R. Sarker's Plans.—The establishment of from 10 to 20 new cotton mills in Bengal is contemplated by Mr. N. R. Sarker, the Indian industrialist now in Britain. "There is still room for them," he told *Reuter* recently.

He also announced that he had asked Platt Brothers, a British firm, to quote for textile machinery to give effect to these plans.

"There is a big market in Bengal," he said. His plans for establishing these new mills represents, in part, his share in the policy to expedite the industrialization of India.

Millions of sterling are reported to be involved in the orders that Platt Brothers Ltd., Manchester textile machinery manufacturers, hope to secure as a result of the visit of the Indian industrialists.

An executive of the firm said: "Mr. N. R. Sarker has visited us and hopes to establish many more cotton mills in Bengal. He asked us to quote for very big orders, running into millions sterling.

"So far as priority is concerned, the Indian market will have to take its turn, unless the Government of India is able to persuade the British Government that the orders are essential to the war effort in the Far East."

Tata Research Project: New Institute of Physics.—It is reported that an institute for fundamental research work, bearing the Tata name, which its founders hope will develop into a school of physics in India equal to anything in the West, is to be opened in Bombay at the beginning of the coming academic year.

The institute which will be known as the Tata Institute of Fundamental Research in Physics, is the joint project of the Bombay Government and the Sir Dorab Tata Trust, and will be jointly maintained by them.

A Provisional Council composed of representatives of the Trust and the Bombay Government will manage the institute. It is stated that Sir Sorab Saklatvala, Kt., Chairman of the Sir Dorab Tata Trust, will be the Chairman of the Provisional Committee and Mr. S. N. Moos, Director of Public Instruction, will be the Government representative, the other members being Dr. John Matthai, C.I.E. and Dr. H. J. Bhabha, F.R.S. The Trust is giving substantial financial support to the institute.

Initially, the work undertaken will be in the field of cosmic radiation, a line of research in which Dr. H. J. Bhabha, F.R.S., who is to be the Director of the new institute, has been engaged for some time in Bangalore where he is in charge of a cosmic ray unit in the Institute of Science.

British Goods for Indian Markets : Need for Textile Machinery.—Mr. A. D. Shroff, Member of the Indian Industrialists Delegation which is visiting England headed by Mr. J. R. D.Tata, told the *Financial News* that India's most urgent need was textile machinery, as during the past six years, no capital replacements have been made.

With mills and factories working two shifts daily in order to meet home demands and exports and rehabilitation requirements, this branch of industry is vital, Mr. Shroff said.

The extent to which Britain can supply goods will depend first on the export licensing policy and second on the result of negotiations for the release of India's sterling balances of 1,000,000,000. Inquiries so far have not been entirely successful, the *Financial News* reported, owing to the inability of manufacturers to predict exact deliveries.

Mr. G. D. Birla, another member of the delegation, in a statement to *Reuter* declared that the Indian industrialists who are in England now were not a Government-sponsored team but were entirely free to draw up their own plans and programme of work. He said that India was on the threshold of a large industrial development and it was but proper that we should be up to date in our knowledge of production technique and be fully abreast of the progress in other countries.

Mr. Birla said they were grateful to British industrialists who had promised to help them in the visit, and hoped similar help would be forthcoming from American industrialists.

Ahmedabad Labour Dispute : Industrial Court's Award.—A case concerning the continuance of dearness allowance to the workers of the textile mills of Ahmedabad was disposed of in Bombay on 15th June 1945, by the Industrial Court, presided over by Mr. Justice Divatia and Mr. Justice Rajadhyaksha.

The Court, giving the award, declared that the workers of the textile mills of Ahmedabad were entitled to receive the dearness allowance for three months after the end of the European war, i. e., after 8th May 1945, in accordance with the scale fixed by the Court in the original award as modified subsequently in 1941, which was based on the agreement arrived at between the parties themselves.

The Textile Labour Association of Ahmedabad made a petition to the Industrial Court, Bombay, to direct the Ahmedabad Millowners' Association to pay the dearness allowance on the present scale, taking into consideration the cost of living as prevailing. Mr. Gulzarilal Nanda, on behalf of the Textile Labour Association, submitted that the workers of Ahmedabad were entitled to receive the dearness allowance for the months after the termination of the European war in case the cost of living continued to be affected by war conditions. He asserted that the cost of living continued to be affected by war conditions although the European war had terminated.

Prior to this there were sporadic strikes in Ahmedabad as a protest against the decision of the Millowners' Association at their refusal to pay dearness allowance with the cessation of the European war in accordance with the agreement reached with the Labour Association in 1940.

Development of Industries : New Committee Set Up in Bombay.—An Industries Committee for the Bombay Province, on the lines of the Policy Committee for Industries appointed by the Government of India, has been set up by the Government of Bombay. It will have the following terms of reference :—

(1) To recommend existing industries in the province which should be further expanded and new industries which should be started during the post-war period.

(2) To recommend such industries as can best be organized as large-scale industries and small-scale, or cottage industries.

(3) To suggest the most suitable sites for the location of the various industries, after taking into consideration the availability of labour, water supply, electric power, raw materials, markets, and the desirability of preventing congestion in thickly-populated areas.

(4) To advise whether the industries recommended should be promoted by the Government or by private agency ; and in the latter case whether the Government should participate, and if so the

nature of the help which would be required.

(5) To advise the Government in regard to panels to be set up for particular industries, consisting of persons specially interested in such industry—such as business men, industrialists and technical experts.

The Committee is appointed for two years, in the first instance, and is to meet at least once in three months. The following are the members:—The Adviser to the Governor of Bombay in charge of Industries (Chairman), the Adviser to the Governor of Bombay (Home), the Adviser to the Governor of Bombay (Revenue), the Reconstruction Commissioner, the Director of Industries (Member and Secretary), the Special Officer for the Electric Grid, the Commissioner of Labour, Messrs. N. D. Sahukar, E. W. Perry, M. A. Master, Neville N. Wadia, Cassamally Munjee, N. M. Joshi, and the Director of Resettlement and Employment (when appointed).

Foreign

World Cotton Conference.—It is learnt that the International Cotton Conference is expected to be held in Washington, U.S.A., in August or early in September.

Peruvian Cotton For India.—The War Production Board in Washington, U.S.A., announced on 27th May 1945 that consideration would be given to application for the importation of Peruvian Pima cotton into the United States and for its shipment on to India from America.

Invitation to Service Men to Learn Cotton Spinning.—An open invitation to men and women leaving British services or war work to learn cotton spinning has been given by cotton spinning employers in England, states the *Daily Mail.* They are offering a guaranteed wage of £4 weekly for men and £2 15*s.* for women during the training period which will last two or three months.

Warm Clothes for Attack on Japan.—American soldiers in the Pacific, long accustomed to fighting the Japanese in jungle heat, will be issued with clothing to withstand 20 degrees below zero. Brig.-General George Hartman, Quartermaster of the U.S. Army Forces in the Pacific, disclosed that cold wet weather clothing would be issued for the first time to troops in the Pacific for use in striking at Japan's inner fortress.

Plans for the Manufacture of Rayon in Australia.—Plans for the manufacture of rayon in Australia were discussed at a conference on 25th May 1945, between representatives of the British rayon industry under Sir Percy Ashley and the Secondary Industries Commission and members of the State Governments.

Sir Percy Ashley explained the proposals for setting up rayon factories. The speakers claimed that the industry would help rather than hinder the wool industry because of the wide range of light fabric that could be made by combining wool and rayon.

Indian Jute : Uniform Ceiling Prices in U.S.—The Office of Price Administration announced that uniform ceiling prices had been established on the sale of raw jute or jute cuttings imported from India with effect from 15th May. Ceiling prices will be sellers' net landed cost from the dock based on the Indian Government's ceiling prices as of 1st March 1945, plus three and a half per cent. which represents the average of mark-ups customarily realized in the trade.

Raw jute at present is in the short supply; so its principal uses are limited through the allocation of the War Production Board to the manufacture of rope, wrapping twine and electrical yarn and roping for military and essential civilian purposes. Jute cuttings are used primarily in the manufacturing of bagging for cotton bales.

Exhibition of Original Textile Designs and Samples.—An exhibition of original designs for textiles and samples and information from overseas markets was opened at the Cotton Board's Colour, Design and Style Centre at Manchester, England, on 13th April 1945. The larger hall was devoted to a display of work by students of the Textile Design Department of the Manchester Municipal School of Art. Fashion drawings, plant studies, woven fabrics, commercial art and modelling were shown to give some idea of the scope of the general training given to design students. Some original textile designs by students of art in India were also exhibited, also a small collection of cotton and rayon patterns recently received from New York. A small selection of patterns had been secured to indicate what has been accomplished by the Swiss textile market during the war years.

Synthetic Textile Plants: Top Priority in Britain.—Faced with the greatest clothing famine for years, the British Government have given top priority for the erection of two super-modern synthetic textile plants in Wales and the North of England, each of which will employ 13,000 workers and will be in full production by next spring.

The clothing shortage is attributed to the war-workers' reluctance to return to the mills engaged in spinning, and the difficulty in getting mills that have been converted to munition factories restored to their original purpose.

Workers are not keen on going back to the textile industry because they are getting better wages in aircraft factories, which are now switching over to the manufacture of aluminium houses.

An official of the Wholesale Textile Association said that the bottleneck in the spinning section had been the direct cause of slowing up production from the weavers, dyers and printers right down to the distribution sheds.

Cloth Shortage in Britain.—The effective reduction of the British clothes ration by one-seventh for the present half-yearly period and almost certainly also for the next half-yearly period is unpleasant but not surprising indeed, owing to the acute shortage of supplies, especially the yarn bottleneck (which is particularly acute for cotton but also bad enough for rayon and wool). Some fear that further reductions may soon be necessary either by increasing the coupon values of rationed garments or extending the range of rationed articles. The latest figures of retail stocks are dress materials only for 41 per cent. women's and children's wear 79 per cent., men's and boys' wear 58 per cent., and wholesale stocks 54 per cent., 74 per cent. and 82 per cent. respectively of the 1942 values. The quantitative figures may be even worse because prices have risen moderately since 1942. On the other hand, the figures may reflect exhaustion of stocks of higher priced better goods which consumers prefer, because coupons are more scarce than money. Even if yarn and cloth production increases, much time must elapse before the improvement affects shops' stocks of garments.

Brazil to Produce Textile Machines.—Brazil will produce textile machinery at a plant to be erected in the State of Sao Paulo, which will manufacture spinning machines and automatic looms to replace worn-out material. Trade estimates state that if Brazil can increase the number of spindles from the present total of 2,500,000 to 6,000,000 as planned, Brazil's cotton textile production will exceed 3,000,000,000 yards annually of which half would be available for export.

If work is started immediately on foundry and machine shop equipment, Brazil might become almost entirely independent of foreign textile machine supplies at the end of three years. Patent rights for spindles and looms do not offer serious hindrances, since many patents have expired and are already in public domain.

Licensing agreements would be necessary for the latest types of high-speed looms but other types of automatic looms might be manufactured without specific licences. While not comparing in speed or output with the newer looms, these would serve the purpose, especially in view of lower Brazilian textile wages.

Australian Wool Estimates—A Lighter Clip.—The number of bales of wool produced in Australia this season will, in all probability, show a reduction of some 14 per cent. on the previous clip. A fact also to be considered is the lighter weights pressed in the packs—the average weight per bale showing a decline on the previous season of about 8 lbs., which represents a further 2½ per cent. aggregating 16½ per cent. in all.

The lighter weights pressed would be due to the thinner, lighter clip produced, while the inexperienced pressing labour in sheds would also be a factor. It does not appear as if the current season's clip will exceed 3,100,000 bales—the original estimate was 3,400,000 bales. In certain reliable quarters, judged from reports and seasonal conditions, the forthcoming clip is expected to be in the vicinity of 2,800,000 to 2,900,000 bales, which will be one of the smallest produced for some years.

World's sheep totals are declining practically everywhere. Heavy slaughterings for civilian and troop consumption have made considerable inroads on flocks, while seasonal conditions on the other hand have restricted lambings and normal replacement.

American Cotton Industry : Rehabilitation Plans.—The *Manchester Guardian* writes: "The United States Department of Agriculture plans for rehabilitating the southern cotton-growing industry have great interest not only to textile experts but to students of State planning everywhere. We have criticized the decision to dump United States cotton abroad by an export subsidy which reduces the price to the Brazilian level.

"This step will not only 'export unemployment' from the United States to Brazil but must exert a strong pressure to force their prices.

"The procedure makes the usual United States criticism of British cartel an addiction hard to bear. Now it appears, however, that there is a remarkably intelligent plan behind the irritating facade. The plan throughout puts emphasis on making cotton growing efficient and competitive.

"The present system of supporting artificial cotton prices and building large stocks of unwanted cotton to maintain an industry which cannot stand on its own feet is declared to be strictly temporary. Moreover, the Government deliberately assume the task of inducing the industry to lean on fitness and efficiency. It will be a brilliant experiment if it succeeds—and remember the Tennessee Valley plan succeeded."

World Cotton Prices : Brazil's Control Plan.—Brazil proposes to control world cotton prices by mutual agreement between the producing countries through quotas and production limitations, says the *Financial News*, giving an outline of the scheme.

"The Government of each producing country will purchase any surplus, financing such by borrowing from the United States Government's Export and Import Bank at interest of 3 per cent. per annum for a maximum three-year period.

Brazil is of the opinion that her cotton and that of the United States should sell at the same world price, with other nations' prices adjusted accordingly—that is, Egyptian cotton, being finer, would bring more, and Indian cotton, being coarser, would bring less.

Brazil warns against prices becoming too high, because of competition with synthetic fibre. Discussing the Brazilian plan for international cotton control, some United States officials express the opinion that, strictly on the basis of quality, United States cotton would command a world price of about half a cent above Brazilian. Normally without any international control, prices for Brazilian and American are about the same. Other factors which would tend to reduce Brazilian price against American are higher freights from South America and the expected extension of American long-term post-war credits to impoverished European countries.

Fifty Years Ago

(From the *Indian Textile Journal*, June 1895)

Irregularities in the Industry

"... That speculation has taken place in buying and selling at many mills, and that inexperienced buyers are entrusted with important purchases is known to every mill furnisher. ... Agents will continue to employ European managers in their mills as long as they think there is an advantage. And when the advantage disappears, the Europeans in Indian mills will also as surely disappear. Europeans, therefore, will continue for a long time to be employed in mills out here in spite of an occasional wastrel that may happen to come along. India does not get the cream of English mill managers, for the simple reason that most of them are too well-paid to be disposed to leave Home for an Indian salary."

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55th Year

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EDITORIAL

Cloth Rationing in Bombay

THE introduction of cloth rationing in a country like India, with its numerous sartorial modes and fashions and with its extremes of wealth and poverty, must be considered a bold experiment. During April and May *sari* and *dhoti* rationing of a sort was in evidence in Bombay, but it blossomed out into full rationing on 3rd June 1945, since when no individual could buy specified varieties of clothing except on production of a duly obtained ration card. In view of the general shortage prevailing in the country, other centres have been watching the experiment and some like Cawnpore, Delhi and Calcutta have already followed in the wake of Bombay or are about to do so, while provinces like Madras, which is by far the most important handloom weaving province, have for the present dropped the idea.

In Bombay city and suburbs the rationing system covers certain specified varieties of clothing like *saris*, *dhotis*, shirting, longcloth and mulls; it allows every individual above the age of six a quota of 30 yards a year and everyone below that age a quota of 15 yards a year. For the purpose of selling the rationed varieties of cloth a certain number of cloth shops have been officially approved and they have been debarred from selling the non-rationed varieties, which could be had in the numerous other shops doing business in them. In the first one or two weeks rationing went off smoothly, fine *saris*, printed and processed voiles and other fine varieties having been reported to be available. It was believed that the ration shops had been supplied with stocks to last for at least five weeks. But, inexplicably, in the third or fourth week complaints were becoming common about the unavailability of desired varieties. The coating that appeared was alleged to have been very poor in quality and mercerized stuff had become scarce, the shopkeepers complaining about the differential treatment accorded to them in the distribution of mercerized cloth. Ration cloth, it was believed, had ceased to conform to the quality stamped on it.

While Government may be depended upon to look into the defects disclosed in the working of the system, it may be of interest to consider some other problems raised by it. A uniform quota has been allotted to each individual, whatever his wants or resources. And this has resulted in some getting less than they require and some more; and the latter have been found to be not unwilling to dispose of purchases surplus to their wants at rates which bear no relation to the ruling rates.

Towels, kerchiefs, household cloth and handloom products have not been brought under the rationing system and could, it was hoped, be obtained from the hundreds of non-ration shops in Bombay city. Handloom products from the south, especially Madura and Mangalore, have always had a good market in Bombay, and the limited ration of mill cloth now allowed has only intensified this demand. But they have gone out of the open market and got into the black market which is again thriving. The rationed shopkeepers complain, on the other hand, that Bombay mills are not able to supply them with goods and that the official control of handloom cloth exports from other provinces has only added to their difficulties. Paradoxically enough, while one is not able to have unrationed cloth at reasonable prices in the open market, a very large number of cloth card-holders have not yet made their permitted ration purchases ! Will it be possible, therefore, to revise the cloth ration quantum upwards and bring more varieties under the system, making black market operations as little attractive as possible ?

"Non-Luxury" Cloth ?

FOR the successful working of cloth rationing on a country-wide scale two things, we pointed out the other day, are necessary, viz., reduction in the number of varieties manufactured and increased overall production. The Textile Industry (Control of Production) Order, 1945, seeks to attain these objects by compelling mills to devote, after meeting all Government requirements, as much as 90 per cent. of their manufacturing capacity to 13 standard varieties of "utility" cloth like *saris*, *dhotis*, shirtings, coatings, etc. Again, 50 per cent. of their maximum capacity in all widths of looms between 48″ and 55″ is to be reserved for the production of *saris* and *dhotis*. *Saris* and *dhotis* are not to be allowed to have headlines in more than one colour and *sari* borders are not to exceed two inches in width. Besides, the Order places several restrictions on the counts that could be spun and lays down that a mill should not manufacture more than three sorts per 100 looms or change more than one sort per 100 looms in any one month. A drastic reduction has been made in the number of non-utility varieties of cloth. In order that the mills may make the best use of the available yarn the maximum densities of the utility cloth have been laid down and no mill is permitted to exceed these limits.

It is now some weeks since the utility scheme was introduced but the first manufactures have had a very critical reception. It was widely believed that the utility products were flimsy and less durable than other cloth, but more profitable to the millowners than the standard cloth which has unaccountably been held to be a failure notwithstanding repeated official assurances to the contrary. In centres like Indore the mills are reported to have already been manufacturing with the number of picks specified by Government and that there was no question of those mills reducing the density of their cloth still further. In Ahmedabad events have taken a new turn. Owing to the alleged anomalies in the price structure millowners are reported to have found it profitable to make large quantities of cloth in the grey state and have it printed cheaply and placed on the market.

It will be noticed that, although the 13 permitted varieties are by themselves important, the scheme does not include within its scope other varieties of more or less considerable importance. The setting apart of 50 per cent. of available loom capacity for *saris* and *dhotis* should cut into the volume of even the other utility varieties. It was well, considering everything, that the Chairman of the Textile Control Board recently attempted to clarify the position at a Press Conference. There is no reason, he said, why utility cloth should be less durable than the others and that the "price structure has been so revised as to discourage mills from manufacturing luxury goods, but no encouragement has been given to them to manufacture utility cloth as such." On the other hand, the 1944 fall of about 25-30 per cent. in the profit level might get worse in the current year as a result of successive price reductions. The Control Board Chairman went on to explain that cloth conforming to utility cloth specifications was already being manufactured by several mills and that there was nothing revolutionary about it. He attributed the unpopularity of the scheme to the implications contained in the term "utility" and he would, therefore, prefer to call it "non-luxury" cloth.

The Chairman of the Control Board omitted, however, to tackle an important aspect of the utility cloth and rationing schemes. With 90 per cent. of capacity reserved for the utility lines, the increased internal demand for the superior varieties, for which only 10 per cent. of capacity is available, should go largely unsatisfied or satisfied only by imports. The Indian cotton mill industry had, however, advanced to a stage at which it could meet all the requirements of the Indian market whether in the matter of prices or qualities, and imports had dwindled down to a nominal volume. Such being the case, what, it is being asked, is to happen to the large quantities of up-to-date bleaching and finishing machinery recently installed in Indian mills? A categorical assurance that when the present emergency passes all restrictions will be removed is, therefore, necessary. Similarly, there is a reasonable fear that, with the Indian mills prevented from manufacturing superior varieties, these varieties might be heavily imported and allowed to swamp the Indian market and nullify the strenuous efforts of the industry in the recent past to capture the entire home market. If the industry's fears are to be set at rest, something more than a vague assurance that the imports of finer goods will not be allowed is imperative.

Mr. J. B. Greaves, C.B.E.

An Appreciation—by a Colleague

IT is always difficult to write of a colleague who is also a friend without praise seeming fulsome. That is particularly so in the case of J. B. Greaves because his work over the war years has been monumental.

I well remember the day, four years ago, when a mutual friend rang up J. B., as he is known to the multitude of those who come into closer contact with him, to congratulate him on the award of a C.B.E. That was the first he had heard of it. He was quietly getting on with a task of the greatest value but concerning which nothing will be mentioned here. That task, nevertheless, was one on which his lively imagination played with considerable success and, as usual, he left for his successors a foundation of ideas on which it was easy, later, to build.

J. B. always sees a problem vividly in terms of a picture boldly outlined; such details as he fills in are no more than are necessary for other people to understand the points which matter. His grasp of essentials is immense. With, for preference, one foot on a table, he will stand and dictate at alarming speed a summary of all that matters and, later, revise the typescript until the objective is there for all to see. Fortunately, his Secretary spells for him. Spelling is not his long suit; nor is so minor a detail as punctuation. He is not concerned with such unimportant conventions and, as usual, he is probably right. It is the idea, the method by which a problem may best be tackled, which matters. The rest, no more than mechanical, may be done by the many who so willingly serve him.

Cotton Textiles Directorate

J. B. went over to the Bombay Office of the Cotton Textiles Directorate, as it then was, in 1941 as Honorary Technical Adviser, Millstores and Machinery. He had a rubber stamp, H.T.A.M., which he thumped on papers as the outward and visible sign of his approval. That the same stamp saved him the trouble of having to spell his own name has not, hitherto, been disclosed but it was probably a subtle idea at the back of his fertile mind. As Chairman of the original Millstores Panel, he brought some semblance of order into what had previously been chaos. Nobody appreciated the improvement more than the industry itself. That is one of J. B.'s most remarkable achievements, the manner in which he persuaded millowners, millstores supplies and the makers of the many ancillary requirements of a most complex industry to come into the happy family of control. His method was to suggest the need for farsightedness regarding prices, the futility of thinking that, for ever and a day, large profits would continue and the desirability of themselves naming ceilings before heaven itself resented encroachment on the skyways. His greatest wisdom was in never asking too much at the beginning. Having got trade interests into the fold, the rest was comparatively easy especially as, when needs were great, he was not above adjusting the scales of his illustrative graphs in a manner which, although entirely correct, lent emphasis to the point at issue. There are more ways of killing cats than by drowning them in cream but J. B. always believed in the judicious application of cream to encourage a taste for control. And it was wonderful how it was lapped up, both the cream and the control.

In November 1942 the control of raw cotton movement by rail was instituted. Greaves was not a cotton expert but he saw the problem of moving cotton from production areas to consumption centres in terms of a map which divided India into Zones and Free Areas, only one of the many operations J. B. has performed on India for her own good.

Prior to the introduction of this scheme no cotton was moving without specific help in the way of priority. The cotton movement plan provided for comparatively free transport of cotton in the directions of the flow of empty wagons. Once that basic idea was grasped, it astonished the cotton trade and the railways how much both were benefited.

Group photograph of the Import Licence Section of the Office of the Textile Commissioner, Bombay, taken on the occasion of the retirement of three of its principal officials. Seated in the centre is Mr. J. B. Greaves, C.B.E., Hon. Chief Controller of Raw Materials and Stores; on his right is Mr. Sohrab K. Khan, Deputy Controller, who is reverting to his business activities, and on his left Mr. B. B. Joshi, L.T.M. (Hons.), A.T.I., Additional Controller, who left last month for England and will be working at Platt Bros., Oldham, for about six months, with a view to studying the latest developments in post-war textile machinery planning.

Textile Commissioner's Office

In 1943 the newly created Industries and Civil Supplies Department came into being and took under its wing the Cotton Textiles Directorate, which organization thereafter was known as the Textile Commissioner's Office. A Textile Control Board was constituted and the Millstores and Cotton Movements Panels were numbered among its committees, others being formed to cover the various activities of the textile trade. J. B. became Chief Controller (Honorary), Raw Materials and Stores and, before long, he had performed another surgical operation on India, this time dividing the country into Surplus Areas and Deficit Zones in preparation for a cloth distribution scheme. Delving into census figures to discover the population of the various Provinces and States, and into handloom as well as mill production figures of cloth, he linked population and production in a manner which would mean equitable distribution if it were not for the warped human element of the black marketeers. Like the poor, those social saboteurs are still with us but that is not J. B.'s fault and, if they only realized the extent to which our knowledge concerning their activities is increasing, they would know their days are numbered.

As in the case of raw cotton movement, so with cloth, back-railing was stopped. Previously, profits had been a main incentive among the merchants and there was no limit to the number of times cloth would ajourneying go for no more satisfactory reason than a profit was consolidated as soon as it reached a temporary resting place. All that was stopped and only the basic idea of getting cloth to consumers remained.

The Textile Commissioner is responsible for getting cloth from production centres to the various Provinces and States and thereafter those Provinces and States are responsible for distribution. There is still room for improvement but no scheme of such magnitude can get into smooth operation without some sort of friction and, gradually, rough places are being eliminated and smooth distribution facilitated.

Anyone who is interested in this vast problem should look into Sudama House and see the way J. B. records this plan visually by a model showing how cloth goes to the people of this country. The model is set up on the third floor, just outside the Board Room and, when supply eventually matches demand and control is no longer necessary, it should be preserved as a permanent reminder of the vision and planning which is providing a solution for the problem of getting cloth from mills to retail markets.

Honorary Adviser, Raw Materials and Stores

And now J. B. is "retiring" to do a little post-war planning for his firm which is, itself, an important link in the cotton textile industry. This retirement, however, is no more than partial. He remains Chairman of the Millstores and Priority Assistance Committee and also of the Cotton Movements Committee, continues his membership of various Committees of the Textile Control Board, the work of which has been his special interest and, most important of all, his services are still at the disposal of the Textile Commissioner as Honorary Adviser, Raw Materials and Stores. Even if he gave no more thought to the problems which still face textile control, it could be said that no man had done a greater job of war work for this country than J. B., all of it, incidentally, in a purely honorary capacity. Fortunately, however, his services are still available in directions of great value and there is only one thought which brings regret. His friends lament the fact that his father, H. R., himself, in his day, a Sheriff of Bombay and a stalwart of India's textile industry, is not alive to see how worthily his son carries on the family tradition.

Ahmedabad Millowners' Reception to Mr. J. B. Greaves

Busy Two-day Visit

(From Our Special Correspondent)

A UNIQUE honour was done to Mr. J. B. Greaves, Honorary Chief Controller of Raw Materials and Stores, Textile Directorate of Bombay, when he was invited to Ahmedabad by the President of the Ahmedabad Millowners' Association and by Mr. Bhogilal Sutaria, President of the Ahmedabad Maskati Market Association, as a mark of esteem and appreciation of the valuable services rendered by Mr. Greaves to the millowners and to the business community. Mr. Greaves is shortly retiring from his important office which he adorned for over three years in an honorary capacity at great sacrifice and inconvenience. On his arrival at Ahmedabad on 27th June 1945, Mr. Greaves was received by the representatives of both the Associations, and he then drove to the residence of Seth Kasturbhai Lalbhai, at whose mansion he stayed for two days.

Soon after his arrival in Ahmedabad, Mr. Greaves visited the Textile Commissioner's office, and saw the routine of the work carried on there, and inspected the actual despatching arrangements at the railway station.

After that, there was a luncheon party at Seth Kasturbhai Lalbhai's place where several prominent citizens were invited.

Mr. Greaves then went to the Maskati Market Association where he was received by the President and the members of that Association, and was shown all the detailed arrangements that they have made for the despatch of piecegoods to all the different zones at the correct price, in the correct quantities, and in appropriate varieties.

After that Mr. Greaves attended a tea party given in his honour by the Ahmedabad Millowners' Association, when he was the recipient of an address of welcome which was read by Seth Ratilal Nathalal, Vice-Chairman of the Ahmedabad Millowners' Association. Seth Ratilal, in the course of his speech, said: "Our distinguished guest of to-day needs no introduction. Not only is he well known to everyone connected with the cotton textile industry, but most of us have also had personal relations with him. As you are aware, he is retiring from the Textile Directorate which he joined at the outset in an honorary capacity. When the Government of India decided to establish the Directorate at Bombay, they were convinced that this organization would, in the very nature of things, have to be different in many respects from other Government undertakings. In other words, the Government had realized from the beginning that the problems of the textile trade and industry required a different approach from that which is usual with Government offices, and in particular needed first-hand commercial knowledge and experience. It was not easy for the Government to discover a suitable person of eminence who could influence both the Government and the trade and industry and resolve differences between them. Fortunately for everybody, Mr. Greaves, who was then working as Honorary Adviser in the Supply Department, came to the rescue of Government, and undertook a most responsible task which happily he has performed with distinction and, above all, to the satisfaction of everyone concerned. It is no exaggeration to state that apart from the work of organization which in itself would have taxed the utmost capacity of a lesser man, his work entailed considerable difficulty in the matter of resolving important problems. At a time when the supply of raw materials and stores was haphazard and uncertain and their procurement difficult, Mr. Greaves, as the Head of the section, assisted the industry to a considerable extent by marshalling all the resources and by making equitable distribution in order that production may not suffer. The Ahmedabad industry also owes him a debt of gratitude for his assistance in tackling the difficult problem of coal. As long as he could manage, he maintained coal supplies to the Ahmedabad mills. The transport arrangement was also evolved by him. All these and many other matters which Mr. Greaves handled bear the stamp of his personality and efficiency. Everyone who has come into contact with him has always been full of admiration for the conspicuous ability with which he handled several difficult problems. As you know, he possesses a most genial temperament and has always been ready to assist and oblige. There is no doubt that his retirement from the Directorate will be a great loss to both the Government and the industry. The Government and the trade would be well advised to request Mr. Greaves to continue the connections he has made and to give his advice when needed, and I have no doubt he will do so.

" In conclusion, I convey on your and on my own behalf our grateful thanks to Mr. Greaves for the assistance he has rendered to us and we wish him all happiness."

Reply of Mr. Greaves

Replying to the address of welcome Mr. Greaves thanked the Ahmedabad millowners very sincerely for the honour done to him. He thanked them for all the co-operation extended to him during the tenure of his office. He said that many kind things had been said about him, but really the credit and debt of gratitude was due to the priority assistance given by Sir Akbar Hydari and to the Textile Commissioner, Mr. Vellodi, Mr. Passmore, and to the members of the Textile Control Board, under whose guidance every step in connection with the provision of the raw materials and stores for the mills had been made. In particular, said Mr. Greaves, the mill industry owed a tremendous debt to the enormous amount of work put in on this committee by Mr. Krishnaraj Thackersey, Mr. Badley, Mr. M. C. Ghia and Mr. Narottam Hutheesing. Mr. Greaves, continuing, said that the Priority Assistance Committee met regularly every week for over two years and have examined recommendations on more than 3,500 individual cases, which would give an idea of the enormous work these gentlemen have put in. As regards the Ahmedabad Millowners' Association, Mr. Greaves declared that they deserved the greatest credit for the way they had worked together to keep all the Ahmedabad mills working and in particular for the very able manner in which they had distributed coal to all the mills in Ahmedabad.

After spending a very pleasant evening with the Ahmedabad millowners at the Millowners' Association Office, Mr. Greaves attended a dinner party held in his honour by Miss Sarojini Hutheesing, a niece of Seth Kasturbhai Lalbhai, at her residence in Shahibag.

On the next day Mr. Greaves visited the Raipur Mills of the Kasturbhai group which is being ably managed by Miss Lilliben Lalbai, a sister of Seth Kasturbhai Lalbhai.

In the afternoon a largely attended luncheon was held at the bungalow of Seth Popatlal Mansukhram, at Shahibag, on behalf of the President and the members of the Maskati Market and Panchkuwa Merchants' Associations. Addressing the gathering, Mr. Bhogilal Sutaria, President of the Ahmedabad Maskati Market Association, stated: "At the outset I thank you, sir, for accepting our invitation to come down to Ahmedabad. Thereby you have very kindly given us an opportunity to meet you to-day on the eve of your retirement from the office. During the period of your high office you were always very sympathetic towards our Association and whenever we had approached you with our various problems and difficulties you were kind enough to help us in solving them and giving us very friendly advice and guidance as a practical business man. Whenever we came to you we have always felt as if we were meeting a sympathetic friend, guide and philosopher. In the end, sir, I take this opportunity to thank you most heartily on behalf of my Association for all the help, advice and guidance you have given us during the most critical period which we as businessmen have passed through. May God give you a long and healthy life to serve the best business interests from the point of view of humanity at large!"

Mr. Greaves in his reply thanked Mr. Bhogilal Sutaria and the members of the two Associations and greatly appreciated the honour done to him. Expressing his admiration of the working of the Associations, Mr. Greaves pointed out how easy it was to deal with them. He said that "if any problem cropped up, it was only necessary to discuss it with Mr. Bhogilal Sutaria and one of their office-bearers, and decision could be reached; and as far as the Mahajans were concerned, they had fulfilled every undertaking they had given. It was no flattery to say that they were the best organized merchants' associations of their kind in India, and that they had done a most excellent piece of work in handling the distribution of piecegoods from Ahmedabad. From time immemorial, the merchants had acted as a most essential cushion between the manufacturer and the consumer, and unless the merchants were there to absorb the stock of slumps as and when they rose, the manufacturer, the worker and the consumer would all suffer. It seems to me essential that every possible step should be taken to preserve the merchant structure." In conclusion, Mr. Greaves, paying a tribute to Sir Akbar Hydari and Mr. Vellodi, stated that what he had been able to do for the merchants was due to the support of Sir Akbar Hydari, the Textile Commissioner Mr. Vellodi, Mr. Bhogilal Sutaria and his office-bearers.

Mr. Greaves visited the "Rupam," a cloth shop ably managed by Miss Sarojini Hutheesing.

In the evening there was a dinner party at Seth Kasturbhai Lalbhai's place, after which Mr. Greaves left Ahmedabad for Bombay, when he was given a hearty send-off.

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Cotton Fabrics from Brazil

SOME 300,000,000 yards of cotton fabrics are to be added to Brazil's export commitments for the next twelve months under an agreement just reached at Rio de Janeiro between representatives of the Combined Production and Resources Board's Textile Committee and the Comissao Executive Textile of Brazil.

Ninety million yards have been contracted by U.N.R.R.A. for delivery over twelve months, and the French Government has concluded orders for 60,000,000 yards which will, it is hoped, be delivered in 1945. In addition, Brazil hopes to supply a further 60,000,000 yards to various other markets. The recent agreement between the Comissao Executive Textile and the Textile Committee of the C.P.R.B. provides for 80,000,000 yards to be purchased for liberated areas, chiefly in the Far East.

Textile Machinery for Indian Industry

By P. C. JAIN, M.A., M.Sc. (Econ.), *London, University of Allahabad*

(*Specially Contributed*)

ONE of the chief problems with which the Indian textile mills would be faced in the immediate future is that of renovating the machinery and technical equipment. And this problem would be more difficult for cotton mills than for jute, silk, and woollen mills. As between (end of August) 1939 and 1944 the number of spindles in cotton mills increased from 10.06 to 10.22 million while the number of looms actually decreased from 202,464 to 201,761, but the output of yarn increased from 1,298 to 1,625 million lbs. and that of cloth from 914 to 1,205 million lbs. This increase in production was secured by working the existing equipment at heavy pressure. The number of idle mills declined from 25 to 6 and some mills were lucky in getting new machinery but, on the whole, the mills had to overstrain their plant in order to secure increased production. The Indian cotton textile industry would therefore emerge from the war with its machinery in such a worn-out and obsolete condition that efficient production in the future would not be possible without wholesale replacements and renovation. In the case of other textile industries the strain on machinery has not been so great and, while in the case of jute mills part of the plant has remained idle throughout the war period, the silk and woollen mills have obtained considerable amounts of new machinery through the efforts of the Supply Department. In any case, whatever jute, woollen, and silk textile machinery is needed would be available more easily than cotton textile machinery because in the former case the demand on the machine manufacturers as compared to their productive capacity would be smaller than in the case of cotton textile machinery. The case of cotton textile industry, therefore, deserves special consideration. A vigorous and timely effort is needed to secure the necessary amount of machinery.

British Machinery

The problem is twofold. In the immediate future, the only chance of getting machinery is by importing it from the U.K., U.S.A. and probably one or two European countries if they are able to supply our requirements. But ultimately the only sensible solution of the problem would appear to be to set up a large-scale textile machine manufacturing industry in India. This alone will enable the Indian cotton mill industry to place itself on a stable basis.

U.K. Chief Supplier

In the pre-war period we imported cotton textile machinery mostly from the U.K. and to a much less extent from the U.S.A. and Japan. In the future, at least for some time, Japan will be out of the market and the home demand on the British and American machine manufacturing industries will be too great to leave much scope for exports. But whatever surplus is available will be exported on the basis of priorities issued by the Governments in the respective countries. A number of considerations would influence the decision of these Governments in granting export licences. An important consideration would be the proportion of exports which the different countries took from them in the pre-war period. It is a sound principle of business to give preference to old customers and we might reasonably hope that British and American manufacturers would be able to induce their respective Governments to act on this basis. This would mean that we might depend more on British textile machine manufacturers than those in the U.S.A. and other countries. In the pre-war period India received nearly 30 per cent. of the British exports and a little less than 1 per cent. of American exports of textile machinery. In this way the Indian cotton mills will have a better claim on British industry. The American manufacturers cannot afford to sacrifice their old customers and, consequently, we cannot hope to get much textile machinery from that quarter. Some of the other conditions determining these imports would be our capacity to pay in proper currency and the future export policies of different countries depending on their industrial policies and the areas of economic influence. These considerations indicate that we can rely more on British than American industry for our machinery requirements. Great Britain will continue to dominate the Indian market for some time in the future and the sterling balances to our credit in London should enable us to pay for British machinery without much trouble. In the opinion of some experts American textile machinery is more up to date and efficient as compared to British and other machinery, but at the present moment this is not the relevant consideration. We shall have to be satisfied with what is available to us and it seems the Indian cotton mills will have to apply to the British machine manufacturers for their requirements of plant and machinery.

It is reported that the British industry is still engaged on war supplies and Messrs. Platt Brothers Ltd., an important British firm of textile machine manufacturers, have made it clear that in order to obtain quick supplies of machinery the Indian millowners will have to convince the British Government that these supplies are essential for the prosecution of war in the Far East. Nobody can question the vigorous efforts which the Indian cotton textile industry has made to meet the war demand. These efforts would undoubtedly be continued with full vigour as long as the war lasts. There should be no difficulty in convincing the British Government of this obvious fact. We recommend that the Government of India should take up this question with the British Government without loss of time in order to procure the necessary amount of machinery for the Indian mill industry. In this effort the element of time is the most important factor. Those who are in the field first will have better chances of capturing the markets. Those who are first to install new machinery will also be first with their goods in the market. There is, therefore, every need for haste on the part of the millowners and the Government of India.

Machine Manufacturing

A permanent solution of the problem would appear to be possible by setting up a textile machine manufacturing industry in India. At present some engineering firms produce crude types of spare parts and accessories. Two factories, one at Gwalior and another at Belghurriah (Bengal), belonging to the Textile Machinery Corporation Ltd., are in a position to produce 2,000 looms and 100,000 spindles per annum. But the actual production has been only nominal as the Belghurriah factory is devoted exclusively to war work and the Gwalior factory has not been able to obtain the required tools, raw materials, and coal. It would be necessary to expand and reorganize the productive capacity of these two factories and to set up new ones in order to be able to meet the demand of Indian mills for machinery.

We fulfil the necessary conditions for running this industry successfully and on a profitable basis. This industry has not yet come into existence as the Indian millowners have followed the line of least resistance and have not bothered themselves since they have been able to get the required machinery from Great Britain. But considerable difficulty was experienced during the war period when Government controls and other restrictions prevented their getting machinery. We should not have suffered such an acute shortage of cloth as has faced us during the past 2½ years if the Government and millowners in this country had not neglected to set up a machine manufacturing industry in India.

We have plentiful supplies of the raw materials, power, labour, and organizing capacity. Some of these were absent in the pre-war period but during the last five years the Indian iron and steel industry has made tremendous progress and the required types of steel are now produced in India. The war has developed India's engineering industry and the number of technically trained labourers has increased. This will greatly assist the machine manufacturing industry. It would, of course, be necessary to import the machine manufacturing plant and a few expert technicians from the U.K. and in this the assistance of the Government of India would be necessary. There will also be some difficulty in securing patent rights and licences, but as experience in other countries, which have started this industry in recent times, shows, it is possible to get these rights on payment of fees. Some of these patents have become public property by lapse of time and can be used free of cost.

The demand from the Indian cotton mills would be enough to sustain a large-scale machine manufacturing industry. It is estimated that within the next five years at least 5,000,000 spindles and 100,000 looms would be required for replacement purposes along with a proportionate amount of bleaching, dyeing, and printing machinery. The Indian cotton mill industry needs considerable expansion and new machinery would be required for this purpose. In future, the annual requirements for replacement and renovation would create sufficient demand for the Indian machine manufacturing industry.

The representatives of two British firms, the Textile Machine Makers Ltd. and Platt Brothers Ltd., visited this country towards the end of 1944 to study the situation and to discuss with the Indian cotton millowners the prospects of setting up a machine manufacturing industry in India. The result of this survey has not been published but the situation does not appear to be hopeful. It is now for the Indian millowners to take the initiative without loss of time.

Why Scientists Do Not Enter Industry

IN the course of a paper read before the British Association Conference, London, England, on the "Place of Science in Industry," Sir Lawrence Bragg, F.R.S., observes:

"Our leaders in politics and industry who have been educated on more classical lines, only too often think of science as a subject for experts, and of scientists as tradesmen who are to be consulted when there is trouble. But one cannot properly use an expert unless one has some knowledge of his field, at any rate enough to realize there is a problem in which he can help; to pick the right man, to put the problem to him, and to know with what relevant information he must be supplied.

"My second bottleneck is perhaps only another aspect of this lack of a widespread knowledge of what science is and can do. There is a very general reluctance on the part of the most brilliant of our young scientists to go into industry. This has been my experience as head of a university science department, and it has been confirmed by the questions I have put to former students who have been doing war-work . . .

"As far as I can make out, the main reason is what is vaguely expressed by them as the 'condition' or 'atmosphere' of industry. I think at bottom this means that the potential employers do not understand what sort of animal the scientist is, his psychology, how to keep him fighting fit and happy in his work. They try to fit him to a Procrustean bed of regular planned output, not realizing that if he is worth his salt he must have something of the artistic temperament with all that implies. A mainspring of the artist's activity is to be an intimate member of a small world of experts, who can appreciate or criticize his work.

"How often have I heard from a past student who has gone into industry—'as long as I go on turning out results no one even talks over my work with me or takes an interest in the scientific side of it!' Combine this with few opportunities or none to spend any time on pursuing an interesting discovery unless it has an immediate and obvious application, and one can see how the keen young scientist is apt to regard industrial research as a *pis aller*."

The Economics of Khadi *versus* Mill Cloth

By V. G. RAMAKRISHNA AYYAR, M.A.

(*Specially Contributed*)

BY *khadi* is generally meant cloth hand-woven from hand-spun yarn. India consumes annually in a normal year about 10 million yards of *khadi* worth about Rs. 34,00,000 and the total consumption of mill cloth is about 4,200 million yards. Spinning and weaving have been the traditional occupations of millions in India. It is difficult to estimate exactly the number of hand-spinners and weavers, but on a rough computation about 230,000 find employment in the industry of which 219,000 are spinners and 11,000 are weavers.

The *khadi* industry received a strong impetus in 1920 when the weaving of the cloth was prescribed by the Indian National Congress as a symbol of discipline and sacrifice. Five years later, the industry was established on different lines. The All-India Spinners' Association was started in September 1925 and was made distinct from the Indian National Congress. A sum of Rs. 25,000 earmarked by the Congress for the production and sale of *khadi* was transferred to it. Since that year the Association has been the driving force in the industry. With the advent of the Congress to power in six provinces out of eleven, and in view of the frequent appeals of Mahatma Gandhi to the public to promote the *khadi* industry, the problem of increasing the production and sale of *khadi* again came to the forefront.

Different varieties of *khadi* are produced in different provinces. In some Indian States also interest is taken in its manufacture. The quality and prices vary from province to province depending on the skill of the worker and the quality of cotton at his disposal. The main factors that have impeded the progress of the *khadi* industry are the comparative dearness of hand-spun and hand-woven cloth and its uncertain quality. The advocates of *khadi* are, however, confident that with the application of modern methods, both the cost of production and the quality can be made competitive.

The All India Spinners' Association covers no less than 15,000 villages and engages over 350,000 artisans. For the period of 18 months ending 30th June 1942, for which figures are available, the value of *khadi* produced was Rs. 1,20,02,430, of *khadi* sold Rs. 1,49,84,513 and of the wages disbursed about Rs. 80 lakhs. During the 18 years of the existence of the All-India Spinners' Association it produced *khadi* of the value of Rs. 6,83,57,862, the value of the sales being Rs. 9,01,89,231. The total wages disbursed have amounted to Rs. 4,10,30,031 representing nearly 60 per cent. of the cost of production as against 22 per cent. in the organized large-scale textile industry. The aggregate funds employed in the activities of the Association have amounted to about half a crore of rupees. The artisans benefiting from the work of the All-India Spinners' Association fall mainly into two groups: spinners numbering 3,24,391 and weavers 25,024 and the number of ginners, carders, etc., 4,842. Their respective shares in the wages bill were Rs. 2,04,204, Rs. 1,57,85,288 and Rs. 48,24,368. Of the total number of artisans, 74,051 were Muslims and 23,968 Harijans.

The aim of the All-India Spinners' Association is to make each village self-sufficient, so far as its needs of clothing are concerned. For a rural population of 288 millions in India, about 2,880 million yards of cloth are needed annually. Assuming the average price of a yard to be four annas, the amount spent by the peasants annually is Rs. 72,00,00,000. If *khadi* is produced and consumed in the villages, vast numbers of the unemployed among agriculturists would find relief.

Subsidiary Occupation for the Agriculturists

The Association believes that the manufacture of *khadi* as an occupation for agriculturists has great potentialities. For instance, between 1918 and 1928, India imported on an average 1,380 million yards of cloth per year. If all this cloth were hand-spun and hand-woven, there would be employment for about 13,000,000 persons. The agriculturists are not busy throughout the year. For three months during the year, about 110,000,000 are unemployed. If these could be trained to produce the requisite cloth, not only would a great saving be made and lasting relief to labour obtained, but their skill and capacity for work, which are likely to be affected by long disuse, would be preserved and even developed. On the competitive aspect, the *khadi* industry is attacked as being costly in production and as offering very low wages to the worker in comparison with the mill industry. For instance, *khadi* of lower counts is said to cost some 40 per cent. more than mill cloth of comparable quality and the higher the counts, the greater the difference in prices. Further, *khadi* has not the finish of mill cloth. Moreover, the minimum wage of a spinner is 3 annas for an eight-hour day, while a doffer boy in a mill gets about 13 annas.

Costs of Production

This disparity in prices and payments is undeniable, but the promoters of *khadi* state that every effort can be made to reduce the cost of production. The first piece of *khadi* produced in the Sabarmati Ashram in 1920 cost Re. 1-1-0 per yard. Plain *khadi* of medium counts was sold some years back at 7 annas per yard. As regards wages, it is argued that the minimum wage of a spinner, viz., 3 annas, compares favourably with the minimum wage of a farmer who, assuming that he makes Rs. 50 a year, earns only 2 annas a day. These farmers have small holdings of land which can neither yield them a sufficient return to maintain themselves nor give them occupation throughout the year. The manufacture of *khadi* would supplement their income and distribute the means of livelihood more evenly than before. The fixing of a minimum wage followed a reorientation of the policy of the All-India Spinners' Association in 1934. Up to that time the Association had been effecting progressive reduction in the price of *khadi* with a view to increasing its sales and giving wide employment and increased relief to villages. Since 1934 it has been argued that those who wear *khadi* do so at a sacrifice and that their sacrifice should be proportionately increased so as to cover the barest cost of production and assist the worker.

In a normal year the sale prices of *khadi* per square yard have worked out as follows:— 10 counts As. 9; 30 counts As. 13; 40 and 50 counts, Re. 1-8-0. Very little *khadi* above 50 counts is produced, though there are varieties of cloth even up to 120 counts. According to the calculations of the All-India Spinners' Association, the cost of production of a rupee's worth of *khadi* is distributed among the producers in the following manner:—

	Rs.	a.	p.
Cotton grower	0	3	0
Spinner and carder	0	6	6
Village broker	0	0	3
Weaver	0	3	3
Transport and other charges	0	3	0

The wholesale prices of grey unbleached mill piecegoods for a normal year are:

	Rs.	a.	p.
Longcloth, standard quality	0	9	6
Shirtings	0	9	0
Leopard cloth	0	9	3
Dhotis	0	9	6
Dhotis (Calcutta) ..	0	14	0
Drills	0	8	3

Taking one pound as equal to 4 yards, it is apparent that a vast difference exists between the prices of mill cloth and *khadi*. Some mills also produce coarse cloth resembling *khadi*, and mill *khadi* is also cheaper than hand-spun and hand-woven *khadi*.

Production and Prices

The question of *khadi versus* mill cloth has been much discussed in recent years. Can *khadi* compete with mill cloth? It may appear preposterous to raise this question in view of the disparity in costs of production and prices of the two kinds of production. But a few facts deserve consideration. Taking such figures as are available, for instance, in 1937, the total approximate number of labourers employed in the production of *khadi* cloth was 217, 493. This number has considerably gone up in subsequent years. As against this, the cotton textile mill industry gave employment to 417,276 workers. In 1937 the total *khadi* production was 725 million yards, the corresponding mill production being 3,571 million yards. A million yards of *khadi* cloth were produced by 30,000 labourers; the same amount of mill cloth requires only 117 labourers. A million rupees of capital invested in *khadi*-making employs 43,499 workers; the same amount invested in making mill cloth employs 1,485 workers. The introduction of machinery results in the displacement of human labour. It is said that the displaced labour can seek employment in the manufacture of machinery. In India there are no such opportunities for the present. But even in those countries where machinery is manufactured, the new industry has not been able to and will not be able to absorb the entire displaced labour population. Thus factory production, instead of providing additional employment actually creates more unemployment in the country unless there is scope to carry on extensive export trade. Factory production is said to bring about a lowering of the cost of goods which is likely to widen the consumption. Admitting that factory production is cheaper than handloom production, the problem before the workers would be to choose between " employment and a little costly goods " and " unemployment and cheaper goods." Any worker would prefer the first alternative because in the second case, the worker has no means to purchase goods, however cheap they may be. The position would have been tolerable if the wages of the displaced workers were added to the earnings of those that are left. What actually happens is a contraction in the wage bill. In *khadi* production the wage bill constitutes 70 per cent. of the total cost of production, while in a modern cotton factory, it comes up to only 20 per cent.

Different Labour Costs

While the difference in the cost of production of *khadi* cloth and mill cloth is not very marked, there is a difference of 2½ times in the labour costs. In one case in Madras it was shown that the cost of production in mills was even higher than the cost of production in the handloom industry. The vast difference in the labour costs and the slight difference between the total cost of production of cloth in mills and that on handlooms is explained in spite of the external and internal economies of mass production, by the huge initial capital cost in the form of machines, their renewals, repairs and depreciation, high management costs and profits. In other words, rent, interest and profits account for this difference. It is to be further noted that the money thus denied to textile labour does not go to enrich other classes of labour in the country or even the cotton millowners, but the greater part of it swells the profits of the iron and steel magnates of Europe. On the other hand, paying far higher prices for *khadi* is equivalent to withdrawing purchasing power (to the extent of additional prices) from the consumers of cloth and rent, interest, and profits (which are unearned increments) and taxes, and transferring all this money to the half-starved workers and peasants in rural areas.

The increase in the expenditure on cloth incurred by the well-to-do sections and the urban communities owing to the higher price of *khadi* would be a net addition to the purchasing power of the villagers as well as the saving of the amount paid as interest and profits included in the price of mill cloth. As far as the substitution of mill cloth by *khadi* in the case of villagers themselves is concerned, there would be some increase in the clothing bill; but this would be more than counterbalanced by the additional wages provided for them through *khadi*. In 1937, 177,496 spinners employed by the All-India Spinners' Association set apart Rs. 2,07,119 of their earnings for the purchase of *khadi* and actually purchased 273,841 square yards of it.

Why the progress of the mill industry after 75 years of existence and with ample protection has been so stunted in comparison with the *khadi* industry which has enjoyed no official protection and which is but 20 years old is explained by the fact that mill production contracts purchasing power of the masses while *khadi* not only expands it, but diffuses it very widely and equitably

Tuberculosis in Industry

By Dr. K. P. MODY

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(Specially Contributed)

TUBERCULOSIS and cancer are two of the major diseases of mankind. Both take a heavy toll of life, but whereas we are still ignorant of the causation of cancer and of the various factors which influence its spread in the human body, we know a great deal about the mode of origin and the channels of infection which bring about tuberculosis. It is an obvious truism that prevention is better than cure and fortunately for the human race, modern methods are able to prevent the spread of tuberculosis, conversant as we are with the etiology of the disease and its mode of infiltration in the body. In 1915 an International Conference on Tuberculosis was held in London presided over and inaugurated by the then Prime Minister, Mr. Asquith. In his remarks he emphasized the great suffering and loss to human lives through this dread disease and, with all the weight of his tremendous influence and oratorical gifts, gave a message to the world that if tuberculosis is preventible it shall be stamped out with all the resources of the Empire. A campaign was immediately started with most gratifying results. The disease which stood second on the list of mortality statistics in 1915, now occupies the ninth place. In spite of this great improvement in the incidence of the disease even in these days, with all the assistance that modern science can give, hundreds of thousands die annually from the " white plague, " as it is aptly called.

In India the situation is truly terrible. No attempt has been made to fight against the disease. We have no proper statistical data to go upon, but we can safely assume that tuberculosis has the highest incidence in this country. Lack of any sanitation and hygiene, entire ignorance of the people, total indifference of the intelligentsia towards medical matters, lack of proper food and diet resulting in malnutrition and an almost complete absence of effective medical relief are some of the factors responsible for the universal incidence of the disease.

Tuberculosis can affect all parts of the body, but it commonly affects the chest. It is a chronic disease lasting for a number of years. Consumption, as it is popularly called, rightly describes the chief feature of the disease; the victim gradually and slowly wastes and fades away. It is caused by a germ known as the tubercle bacillus, which is inhaled into the lungs. The inherent vitality of the body is very often capable of fighting against the germ and neutralizing its ill effects, so that the mere presence of the bacillus does not necessarily bring on active disease. Had this not been so, entire populations would have been wiped out. If for some reason the organism is debilitated or weakened from such causes as overcrowding, lack of fresh air, lack of sufficient food and the effects of diseases like influenza, the bacillus settles down and begins its ravages slowly and surely. Fortunately the disease progresses by stages, and if we could only detect it in the early phase, it is capable of being completely cured. Once this opportunity is lost, the disease progresses with destruction of the lung tissues, with the formation of pus and abscess cavities. In this phase the patient becomes a danger to the public and a serious source of infection. The habit of indiscriminate spitting in streets, public places, railway stations, trains and trams, in fact in any and every place, including the home, is largely responsible for the widespread incidence of the disease. Billions of germs are thus scattered about from patients with advanced disease; these germs are inhaled and thus carry the infection to the strong and healthy. The infection becomes widespread in places where there is overcrowding. Thus mills, factories, and one-room tenements, are important breeding places for this terrible scourge.

Is the disease curable? Definitely so in the early stages when only a small part of the lung is involved. Early diagnosis, therefore, is most important not only from the individual's point of view but also from the point of view of the population. Every case of early tuberculosis neglected is likely to go on to the advanced stage and thus become a focus of infection and spread. The only way of diagnosing an early case is by X-ray examination, which can detect even a minute focus, which it would not be possible to diagnose by any other method. Two methods are available for X-ray examination, one is by screening and the other by taking a picture on a film. In screening, the patient stands behind a fluoroscopic screen and observations are carried out in a darkened room. Tuberculous lung throws shadows different from normal lung. This method is cheap as it does not require the expense of films, but it is time-consuming and not so precise, and there is no permanent record for future reference. The film, on the other hand, is expensive, but has the advantage of giving a permanent record and is also more reliable.

When Canada sent her first contingent overseas, nearly 2 per cent. of the men were invalided home with active tuberculosis. These men had all passed the usual medical tests but they were not X-rayed.

These men who had to be turned back must have had latent tubercle foci in their lungs, which flared up under the stress and strain of war. The Canadian Government had to invalid them, treat them in hospitals and sanatoria, and had to pay pensions and gratuities, all of which came to a very high figure. And so the Government decided to X-ray all recruits before accepting them. Although the civilian radiologists, to whom the work was first assigned, did not charge any professional fees, the expenses alone came up to a high figure, nearly Rs. 8 per person, which naturally made a big total. And so advantage was taken of a method known as Photo-Roentgenography or Photo-Flurography. The apparatus consists of the usual X-ray equipment but with the addition of an ordinary camera attached to the fluorescent screen. The patient stands behind the screen and the image on the screen is transferred by means of the camera attachment to a small size ordinary photographic film, either a 35-mm. or a 4/5 inch size. The resulting photograph is not a radiogram or an X-ray picture, but it is the image of the screen transferred by means of the camera attached to the screen to the small-sized film. The advantages are obvious, there is enormous saving of cost per person, which is cut down to five annas per person. Moreover, 300 to 500 persons could be X-rayed by this method per day and recording is much simplified.

The apparatus was invented just before the war and has already been tried in several countries for mass radiography of whole populations. The method is now normally used in the Services.

Tuberculosis is going to be a much more serious problem after the war all over the world for obvious reasons. X-ray examination of groups of people, even of whole populations, is one of our most valuable methods of control of this disease. It will enable us to find out the early cases, many of whom are not even aware of their disease, and treat them successfully. This method will also permit us to detect the advanced cases who are a source of menace to the public, and who will require isolation in hospitals and sanatoria.

Prevention of disease and its early detection will be one of the most important items on the programme in post-war reconstruction. A great deal of cooperation will be essential to its success. It should be made obligatory on industrialists and employers of labour to ensure that the men they employ are healthy to start with and keep healthy during their period of service. This is not merely for humanitarian reasons, but it will be to the advantage of the employers that the men who work for them shall give the maximum output when they are fit and healthy.

Tuberculosis must have a large incidence in industries, where men have to work under not too ideal conditions. There are no figures available as at no time has a survey been taken of the health of the labouring classes. Periodic medical examination should be made compulsory, and this should include X-ray examination of the chest. A Photo-Fluorographic unit should be installed, costing about Rs. 50,000, with a running cost of about

As. 5 per head. Mobile units are available, so that one unit can function for several mills. Two or three such units can examine the whole mill population well within a year. The benefits of such tests should be extended to the families of the workers. The millowners should not rest content with examinations alone; those found suffering from tuberculosis should have facilities for adequate treatment in co-operation with the health authorities. And during the period of their illness, it should be made compulsory on the employer to arrange for sickness allowance to his family. This can easily be done if the workman is made to contribute to a sick benefit fund, a form of health insurance, to which both the worker and the employer must contribute.

Industrial health and sickness are problems of vital importance, and tuberculosis is only one of them, though one of great responsibility. The health and happiness of the worker demand urgent solution. Socialization of industries is a catch-phrase which has gripped the imagination of the labouring class all over the world. Let us hope that in the interests of progress and advancement in the industrialization of our country such drastic reorganization of the social fabric will not materialize. But if employers and capitalists choose to ignore modern tendencies and persist in running industries on old conservative lines, thinking only in terms of earnings and dividends, then industrial revolution is bound to materialize.

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Gravity of Coal Situation

Coal Consumers' Association of India Formed

SINCE the last Coal Mining Committee was appointed in 1936 by Government to report on the coal position, nine years have passed during which the coal situation has further deteriorated, apart from the war, by exhaustion of certain mines yielding coking coal and other coals, the misuse of metallurgical coking coal for industrial and locomotive steam-raising purposes and for export and bunkering and for other reasons, with the result that famine conditions prevail in the coal industry.

This growing scarcity of good and second class coal aggravated by the shortage of wagons has produced the most serious coal famine our industries have ever experienced leading to the closing down of many factories and unsatisfactory working of a still larger number. The quality of coal supplied is very poor and the annual production of coal is not sufficient for the industrial needs of the country. The present controlled prices of Bengal and Jharia coal figure about Rs. 12 to Rs. 15 per ton at pit's-mouth; after the war if control is removed they are expected to go up to Rs. 25 to Rs. 30 per ton because of increased demand for coal which would be made by the huge industrialization schemes and the demand for coal for export purposes. It is estimated that the present annual production of coal is about 22 million tons in spite of every effort made by Government to have the production increased. Even if this production is increased to about 27 million tons after the war, it will be quite unequal to the post-war local and export demand which is estimated at about 35 million tons per year.

In order, therefore, to make efforts to minimize the effects of the crisis in the coal situation, it was felt necessary to have an organization of big and small industrial consumers of coal to protect their interest by representing to Government and the public the consumers' side of any question affecting coal like prices, production of coal, railway freights, wagon facilities, etc.

With this view the Coal Consumers' Association of India has been formed at a meeting of the representatives of the industrial consumers of coal held recently, both to safeguard the interests of consumers and to instil in the public a higher appreciation of the necessity of coal conservation and fuel economy.

The officers of the Association are Mr. D. C. Driver, Tata Iron and Steel Co., Ltd., President; Mr. B. Thornton, Messrs. Indian Iron and Steel Co., Ltd., Vice-President; Mr. A. K. Bhattacharya, National Iron and Steel Co., Ltd., Calcutta; Mr. B. K. Rohatgi, India Electric Works Ltd., Calcutta; Mr. E. Da Costa, Textile Machinery Corporation Ltd., Calcutta; Mr. Mirchandani, Kaycee & Co., Ltd., Lahore; Mr. N. K. Ghosh, India Machinery Co., Ltd., Calcutta; Mr. R. P. Sinha, Hindustan Bicycle Manufacturing and Industrial Corporation Ltd., Patna; Mr. S. G. Khaitan, Steel Products Ltd., Calcutta; Mr. S. Roy, Associated Cement Co. of India, Ltd., Bombay, and Mr. T. S. Sitapati, National Insulated Cable Co. of India, Ltd., Calcutta, members of the Committee.

The office of the Association is situated at Security House, (2nd Floor) 102-A, Clive Street, Calcutta.

The Industrial Worker In India—3

Housing and Sanitation

BY LALITA KUMARAPPA, B.SC. (*Cornell University, U.S.A.*)

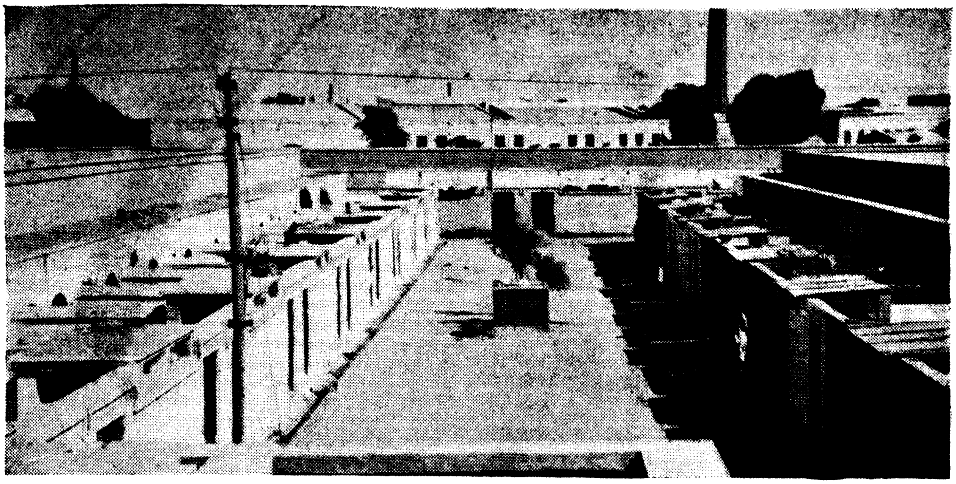
(*Specially Contributed*)

THE housing and sanitation problem is one of the major ones confronting philanthropic-minded industrialists who wish to improve the lot of those working under them. And to-day, I wish to deal with this vital subject.

As I have already mentioned in one of my previous articles, India is primarily an agricultural country. But times have changed, and we are moving along the road of progress, albeit less rapidly than our Oriental neighbour, Japan, and our Occidental allies. But nevertheless we are slowly but surely becoming industrialized. In order that this change might be achieved it was necessary to induce the farmers and villagers to come to the cities. Enticing wages were offered, and *they* came. But alas for their rosy dreams of a comfortable life in their new and unaccustomed environs! Though their income was greater, the bare necessities of life cost more, and they could hardly make both ends meet. In order to save rent, many of them crowded together in one-room tenements that comprised many blocks in the poorest localities, or near the factories and mills where they worked. And *thus* were most of our slums and millhand areas formed. In these tenements it is not at all uncommon to find as many as a dozen people living in a single small room measuring 9 feet by 12 feet. Human beings, like ourselves, live in tenements—musty, sooty, and bleak. Back-to-back tottering abominations that are damp and airless, and into which the purifying and sunny rays of the sun never enter are the abode of millions of our people. Windows have no panes, and roofs leak during the rains. Some effort is made to patch them up with pieces of gunny sacking, cardboard, rags, and old scraps of tin. Open drains run in front of many of these chawls. One finds in several of these mill areas that the people living in these tenements often have no clean water to drink, wash in, or bathe in. They do not get enough water to clean their rooms or their utensils after cooking. Very frequently the flushes in the lavatories do not work, and the landlords pay no attention to either of these matters. Stairways, passages, and wells are contaminated with refuse and excreta. Overcrowded as these slums are, yet there seem to be more flies than people, and this is one of the quickest and surest methods of spreading disease rapidly. Truly a *grim* picture, this. Surely such "sore spots" are a disgrace to our cities, and urgently need cleaning-up. That we permit humans to live under conditions which ought not to be permitted even

Housing: The mill workers and their children living under insanitary housing conditions. This mode of living spreads disease and inefficiency caused by devitalization.

Housing: This photograph is in direct contrast to the previous one. Note the well-planned, sanitary and cheerful quarters for mill employees. Everything is clean and neat and the people who live in them respect themselves and also keep better health.



This large mill in Lyallpur has planned workmen's quarters on a much bigger scale. But the aim is the same as in photo No. 2, namely, to give employees a chance to live in well designed, comfortable, clean and attractive homes of which they can be proud. Even electric lights have been installed. The courtyard provides a nice playground for the children, and thus they are not a menace to traffic on roads.

for domestic animals (if we have a regard for them, and regard for the food they give us, and the useful work they render us) tells against our smugness and satisfaction with our own narrow lives.

In these uninviting chawls which millions of Indians call *home* we find different standards of cleanliness and neatness prevailing. Much, of course, depends upon the woman of the house, or rather, room, for this is a more accurate description of her home. If she is a worthless and lazy baggage, or saddled with many small children, she is too exhausted to attend to the sweeping and washing of the floor, the scrubbing of the cooking and eating vessels, and the washing of their clothes. She just lets things go from bad to worse, and we find the room dirty and grimy, and reeking with the pungent odour of unwashed bodies and clothes plus the various smells of cooking—altogether an unpleasant combination. The windows, if any, are usually kept closed, and this adds to the unhealthy atmosphere prevailing in the room, and is therefore, a rich breeding ground for the germs of Tuberculosis which thrive in dark, closely shuttered rooms. Even the surroundings of these tenements are indescribably sordid and filthy. One frequently finds latrines close by, as also stables and sheds for cattle. The waste matter and refuse from these pollute the air, the soil, and the water for blocks around them, and thus are traceable the beginnings of several epidemics! Chitra Naik has described an unforgettable sight she saw as follows: "The pavement on which we stood ran around the building, and was covered with a multitude of curious objects—a stray cow chewing the cud; some mongrel dogs dozing in the sun; a dead kitten; children in rags, or absolutely nude, playing and fighting; heaps of cow-dung; piles of garbage; *and Women* !

Women engaged in a variety of occupations; women keeping a close guard over the tattered *saris* they had spread on the pavement to dry; women rolling up *bidis* with quick fingers, rocking themselves rhythmically to and fro while performing the operation; women who tried to sew pieces of rags into quilts with the aid of long thick needles; women who stared at the road with a far-away look in their eyes, and absorbed in unreadable thoughts, at intervals spitting spitefully on the road as if it were an object of scorn and hatred. All of them had this in common: they wanted to warm themselves, and they wanted space—other than that of their narrow, cramped quarters—to sit in and move about in. Only during the rains, do they forego the pleasure of frequenting these hospitable pavements." It is truly pitiable to see these villagers driven to living in city slums *hating* the rains, *hating* their work, *hating* their life, and, above all, *hating* the necessity which drove them to seek a livelihood in the cruel hard cities nearby.

In contrast to this rather gloomy picture we have the chawl that is neat and shining, and I *have* seen some that fit this description. Though it is quite obviously the dwelling of a poor man, of the working class, yet we admire the clean, cow-dunged floor, the gleaming brass vessels neatly stacked on a shelf, and the clean sweet-smelling clothes hanging folded on a line at one end of the room. The children too are a credit to the mother, for she has done her best to maintain the principles of hygiene with regard to herself, her offspring, and her home, of which she is justly proud! This type of woman spends her spare time learning to sew, or learning some other craft by which she can eke out their meagre income still further. If there is a lecture or demonstration in her neighbourhood she is eager to attend it and see whether she can pick up some useful knowledge on child-care, home nursing and first-aid, or on civic and personal hygiene. She may even attend a literacy class in the evenings. It is *she* and others like her who are the hope of future Industrial India!

The social worker, health visitor, and nurse often have a difficult job on their hands trying to teach these poor ignorant creatures a better way of living. Many of them are ignorant, unwilling, and superstition-ridden. When suggestions are made to send the sick person to a doctor or dispensary, the retort often is, "Send him to a clinic! What for? We don't need your medicines. I've already promised to sacrifice a chicken to the gods. They will curse us if we use your new-fangled medicines and strange advice. No medicines are needed in the home where there are gods. They will make him well. Go away, and leave us in peace," and much more in the same strain.

Therefore, when some of our leading business magnates decided to do something about the matter, it was a step in the right direction and promised to fulfil a much-needed want. The ideal way of tackling this problem would be to pull down these awful quarters, and erect, in their place, garden cities and villages on cheaply—bought land just outside the city limits. Provided with good and inexpensive transportation to their places of work, I am sure these industrial employees would immediately jump at the chance of quitting their present unattractive quarters to go and live in these pleasant model dwellings. Their hearts would be light and filled with joy, for Indians are a rural people, and live close to the soil. They love trees, flowers, and green grass; it reminds them of the pretty villages they left behind them in their search for work.

Several mills have set good examples by building attractive and sanitary living quarters for their employees. Look at the photographs alongside and compare the model homes with the miserable shack. Some even have an enclosed courtyard for the children to play in, and fine bathrooms and lavatories to make the habits of cleanliness become a pleasure and a joy—and to be practised with enthusiasm. Many of these model dwellings are also supplied with electric lights.

But in order that the workmen appreciate their new abodes and care for them properly, it is necessary that they are taught personal hygiene and civic cleanliness and how to care for their new homes so that those living in them will derive the maximum satisfaction while at the same time maintaining a high standard of health. For this purpose, a trained labour officer and social worker is needed, and some mills and factories have done splendidly by having them on the staff as paid and full-time employees.

In order that the prevailing standard of health might be improved, it is necessary that home visitation be made an important part of the welfare programme. In this way the social worker wins the confidence of the people she has to deal with. Intimate family problems are frankly discussed, but in a friendly, rather than inquisitive, manner, and solutions found. The chawl dwellers are shown how

(*Continued on page* 720)

Distribution of Indian Textile Production

By LALBHAI R. MEHTA, B.A.

(Specially Contributed)

FACT No. 1, Fact No. 2, and Fact No. 3, so widely advertised by the Millowners' Association, Bombay, have tried to convince the average Indian that the industry has adequately met the war-time challenge to produce enough for the services and civilians alike, and that during this war India's cotton textile industry has indeed "delivered the goods." The Fact No. 1 has declared that "the industry produced on an average, before the war, 3,800 million yards annually as against 4,800 million yards now. If the production of the cotton handloom industry is also included, and if allowances are made for the cloth sent out of the country and supplied against defence requirements, there was available in the year 1943-44, 5,868 million yards, as against the pre-war average of 6,260 million yards, a reduction of only 6 per cent. from peace-time supplies." Reading these facts, the man in the street gets confused, as, reading through the columns of his morning papers, he daily comes across news like "On the 7th May, 10,000 semi-naked men and women swarmed at Meherpur and marched together to the magistrate's office," "In Netrakona 2,000 people of both sexes marched to S.D.O.," "Robbing the dead of their shrouds seems to have become a common practice by the poor people in U.P.," "Instances of people committing suicide from want of cloth," "High placed Government office clerk attending his office in his wife's *sari*," "Students unable to appear in the exam. for want of *saris*"—and numerous other instances reported from the different corners of India, reveal acute scarcity of cloth. No wonder the common man has been confused by reading the advertised facts mentioned above. No one has been out to refute the "irrefutable proof" that the Indian cotton textile industry has "delivered" the goods. As has been suggested in Fact No. 3, by the words, "there is no failure at the production end, the reason for the present 'famine' must be sought elsewhere," it is quite obvious that there is something seriously wrong somewhere at the other end, viz., the distribution end.

Out of all these facts, one central fact emerges, and that is, the Government, who has taken up the task of distribution, has bungled in managing the distribution of cloth.

Let us face facts. Take, for instance the month of February 1945. During this month, the textile mills have produced 317,022,000 yards of cloth, the details of which are seen in the table given below.

Out of this total production of mill-made cloth of 317,022,000 yards, the Government have taken up 55,834,000 yards for war purposes and 32,475,000 yards have been exported out of India, leaving behind the total amount of 228,713,000 yards of mill-made cloth and approximately 105,400,000 yards of cloth produced by handloom industry of India, if we estimate the handloom production according to the Fact Finding Committee's Report, for civilian consumption.

Times without number, the Textile Control Board, the Federation of Piecegoods and Yarn Merchants' Associations of India, representative organization of the Indian textile trade, the people and the Press have requested the Government authorities to curtail the amount of quota of Indian mill-made cloth for war supply and get the cloth for war supply from U.K. and U.S.A. But the textile industry of Great Britain and U.S.A. had been occupied with the production of armaments and other war supplies, the Indian textile industry had to bear the responsibility of clothing the huge armies of the United Nations. The Government of India failed to decrease the quota for war purposes till recently when Sir Akbar Hydari succeeded in his mission to England in curtailing the quota of war supplies by 200,000,000 yards.

Production of Cloth during the month of February, 1945
('000's omitted) in yards.

	Varieties	For war purposes	For export	For civilian consumption			Total all-India production
				Standard	Other cloth	Total	
1.	Grey cloth	22,040	19,777	15,465	104,334	119,799	161,616
2.	Bleached cloth ..	16,477	3,706	..	49,564	49,564	69,747
3.	Coloured cloth ..	17,317	8,068	76	44,537	44,613	69,998
4.	Printed cloth	..	924	..	14,737	14,737	15,661
	All-India total ..	55,834	32,475	15,541	213,172	228,713	317,022
5.	Coarse cloth	54,669	30,372	12,475	167,166	179,641	264,682
6.	Fine cloth	65	1,716	3,066	31,039	34,105	35,886
7.	Superfine	1,100	387	..	14,967	14,967	16,454
	All-India total ..	55,834	32,475	15,541	213,172	228,713	317,022

One can understand the necessity of supply for war purposes but one can't understand the necessity of exporting the huge amount of 32,475,000 yards of cloth. The Export Committee of the Textile Control Board have, in view of the acute scarcity of cloth prevailing in the country, repeatedly requested the Government to stop all exports and if that were not possible, to curtail the amount of export of cloth to the minimum. However, the resolutions of the Export Committee, the Textile Control Board, and the Federation fell on deaf ears. When the Indians were insulted and being ousted from South Africa, even then the exports from India continued. When the Persian and Middle East Governments were making huge profits from the cloth imported from India, the benevolent Government of India not only did not stop the export to those countries, but fixed the selling price of cloth to be exported to that country so that those Governments can get the Indian cloth at cheap rates. When we bear in mind the acute scarcity of cloth prevailing in India, it seems criminal on the part of the Government to export such an amount of cloth out of India to the countries which moreover, are notorious for their ill-treatment of their Indian domiciles.

Distribution of Cloth for Civilian Consumption

Distribution of cloth for civilian consumption is entirely managed by the control authorities under the direction of the Textile Commissioner and the Provincial Textile Controllers with their huge control machinery. The Textile Commissioner has at his disposal the expert advice of the members of the Textile Control Board and its various sub-committees who have years of experience. For purposes of efficient distribution India is divided into ten zones (since 9th June 1945 into 15 zones); and each zone is allotted a monthly quota of cloth in proportion to its requirements, based on the population of that zone and *per capita* allotment to that zone. According to these fixed quotas, cloth is being despatched from the manufacturing centres through quota holders to the respective zones. This system will appear quite reasonable. However, facts are facts.

The Industry's Committee of the Textile Control Board, at its meeting held last April, prefaced a resolution, unanimously passed, urging every millowner to increase the production of cloth to the utmost capacity and by all possible means by the words "The Industry's Committee realizing the situation arising out of the very heavy shortage of cloth in the country, in spite of increased production." Mr. Gordhandas G. Morarji, the President of the Federation of Piecegoods and Yarn Merchants' Associations of India, in the course of his presidential address at the annual general meeting of the Federation, states: "In spite of so much production of cloth and yarn in the country, unprecedented acute shortage of cloth and yarn is felt throughout the country."

The table of statistics given below relating to the Indian textile trade, published on page 39 of the *News Bulletin*, the official organ of the Federation of Piecegoods and Yarn Merchants' Associations of India, reveals the distribution of cloth in India during the month of February 1945.

In spite of the fact that the number of bales given in the table have been despatched during the month to various deficit zones, the country is suffering from cloth famine.

Where's the Wrong

The main reasons for the maladministration of distribution are:—(1) Lack of co-ordination between the Central authorities on the one hand and the Provincial and State Control authorities on the other, (2) Monopolistic system of distribution in deficit areas, (3) Transport difficulties, and (4) Complications of textile control.

Want of Co-ordination between the Central and Provincial and State Control Authorities:—Apparently it seems that the Textile Commissioner, Mr. Vellodi, in consultation with the Textile Control Board and its various committees and sub-committees, decides everything regarding distribution of cloth for the whole of India. And to the credit of Mr. Vellodi and Mr. Krishnaraj M. D. Thackersey, one must admit that they have successfully arranged that the deficit areas may get their allotment of quota at controlled rates from the manufacturing centres. Well, there ends the Textile Commissioner's responsibility. He has no powers to interfere in the distribution of cloth within the Provinces and States, which is left to be looked after by their Provincial and State Controllers who times without number have bungled seriously and have not heeded the suggestions of the Textile Commissioner and the Textile Control Board for improving the system of distribution.

Mr. Krishnaraj stated last April, "The position, difficult as it is on account of shortage of cloth,

—	Bombay Surplus Area	Sind D. Zone	Punjab D. Zone	U. P. D. Zone	Bihar D. Zone	Bengal D. Zone	Orissa D. Zone	C. P. D. Zone	South D. Zone	Rajputana D. Zone
Total requirements in bales of 1,500 yds.	31,218	4,371	45,062	31,083	20,189	40,285	9,059	13,617	45,094	15,097
Quota	..	3,300	32,950	21,200	17,800	21,750	7,000	4,300	8,950	6,900
Total despatched during the month	843	1,568	18,223	9,138	12,784	10,743	2,974	3,489	3,992	3,315

has been made most unbearable by serious failures of distribution. The position would not have been so difficult as it is to-day, had some of the Provincial and State Governments realized the importance of cloth and the need for controlled distribution." Bengal has been a glaring instance of provincial mismanagement. After studying the cloth situation in Bengal, Sir Tej Bahadur Sapru and Sir Jagadish Prasad came out with a statement stating: " Discussions as to the spheres of Central and Provincial autonomy seem singularly out of place in dealing with an emergency of this nature. They must not be allowed to prolong the cloth famine in Bengal." Bengal is not a solitary instance. Almost everywhere an unsatisfactory situation prevails. Indicting the Provincial and State authorities Mr. Gordhandas G. Morarji, stated: " They have no staff to organize controls and the result is that the so-called controls in the hands of inexperienced Government officials have led to a state of chaos and confusion in the Provinces." The Textile Control Board and the Distribution Committee and the Industry's Committee, too, have demanded that the Central Government should take over the administration of controls. Mr. K. M. D. Thackersey in his speech at a meeting of the Textile Control Board held on 21st July, 1945 in this connection stated " I feel a stage has now been reached when it is necessary for the Government of India to bring the Provincial Control machinery within the jurisdiction of the Central Textile Commissioner with a view to secure uniform application of distribution policy and administration of control measures in all Provinces and States. Unless this is done, I am afraid that whatever efforts the Board might have made to increase and maintain production, scarcity conditions will continue to prevail in as much as in the absence of effective distributive machinery, cloth will not reach the consumer in the manner required." However, nothing has happened so far in this direction.

Distribution within the Provinces

As stated above the function of the Textile Commissioner of the Government of India ends when the allotted quota reaches the Provinces. He has not to interfere in the internal management of distribution within the Province or a State, which is left entirely in the hands of Provincial or State Controllers, most of whom have proved quite inefficient to cope with the task. It took months for them to realize that normal trade channels were absolutely unavoidable and necessary in the existing system of trade for the proper distribution of cloth in a vast country like India, and though many have given up, still there are some who have fantastic notions of working the control measures without the co-operation of existing trade channels; not only that, but every effort is being made by them to cut all the trade channels as far as possible and eliminate the so-called middlemen for the ultimate benefit of the consumers. Mr. Thackersey declared before the T.C.B. on 21st July, 1945, "as regards distribution, I fully realize that owing to varying conditions existing in various Provinces and States, it is necessary to devise machinery for distribution which will fit in with these conditions. Even then, I firmly believe that the main principles which have been indicated by your Board, viz., utilization, as far possible, of norma trade channels on their basis of transactions in the basic years 1940-42, should be adhered to. Your Board has more than once drawn the attention of the Government to the necessity and importance of the trade being retained substantially in the hands of those dealers who were engaged in it in the years 1940-42." In spite of the resolution of the Textile Control Board and the recommendation of the Textile Commissioner they appointed so often thoroughly inexperienced persons who had never before been in the trade and the result was that there was chaos and confusion. Bengal, again, had been a glaring instance. Thousands of yards of cloth were smuggled away to China, Tibet and Persia. Huge amounts of stocks of cloth received from manufacturing centres were dumped into Government godowns, the officials not knowing how to distribute them. As a result a hue and cry arose in almost all the Provinces and States of severe cloth famine. Still it would be wise if the control authorities would accept the co-operation of traders' associations.

Transport Difficulties

The war-time exigencies put a great strain on transport problems. During the Budget session in the Central Legislative Assembly, Sir E. Benthall was severely pulled up when railway items were being discussed by the representatives of the people. When there was a shortage of wagons for moving consumer goods from producing areas to deficit areas, the Government exported hundreds of wagons to the Middle East for war purposes. Movement of cloth was seriously hampered due to inefficiency of the Transport Department, and even when deficit areas were " starved " of cloth, huge quantities were accumulated in railway godowns in producing centres. Still the working of the transport system leaves much to be desired.

Complications of Control Measures

Want of proper co-ordination between different sections of the Control Departments and between the Provincial and State Control Departments on the one hand and the Central Control Authorities on the other, and, added to that, varying interpretations given by different authorities have often caused undue inconvenience, hardship and financial loss to the traders. Besides the Cotton Cloth and Yarn (Control) Order, 1943 of the Central Government, each and every Province and State has a Control Order of its own which is not quite similar to that promulgated by the Central Government. Every day numbers of notifications are being issued by the Central and the Provincial Control authorities. None can guarantee when the Control Order will change its form and identity, which is expected any moment by a fresh notification. Just to rectify the blunders committed by previous notifications, other notifications by these inexperienced controllers are issued which commit more blunders and to rectify these blunders, still more notifications are issued and this goes on *ad infinitum*.

These and some more factors have been responsible for maladministration of distribution throughout India. Still, it is very amusing to note the attempts made by various parties to shift the responsibility for this chaos.

Types of Man-made Fibres

By W. T. ASTBURY, M.A., Sc.D., F.Inst.P., F.R.S., in "*Endeavour*" *

> *" You will never make a Sattin purse of a Sowes ear," said the old proverb. This precise metamorphosis is still impossible, but chemists have closely approached it : for from the fats and proteins of a sow's ear it is possible to synthesize nylon, one of the most successful of man-made fibres. Dr. Astbury, who with his colleagues has made the chief advances in the protein fibre field, has a fascinating story to tell of man's rivalry with Nature.*

BIOLOGICAL fibres are of the nature of molecular yarns spun from long chain-molecules. It may seem almost obvious to us now that this should be so, but in fact it is a generalization that has emerged clearly only within the last twenty years. And it is one of the great generalizations of our time, not simply as regards its industrial implications, gratifying though they are, but in a much wider and more wonderful sense. In the make-up of living tissues chain-molecules are pre-eminent, and the study of their forms and combinations is fast laying the foundations of a new biology. It is not directly with such high adventures, however, that we are concerned here, but rather with some of the lessons that have been learnt from them. The purpose of this article is to explain how man has set about making fibres in Nature's image, and to classify the results of his efforts in terms of chemical constitution and physical properties.

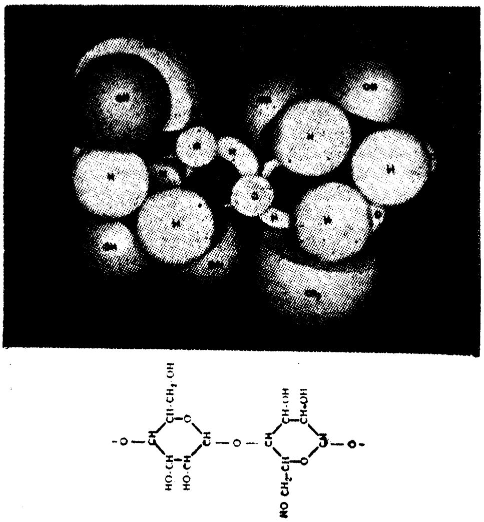


Fig. 1.—Scale model of two consecutive links in the cellulose chain

In what follows we shall be wise after the event and talk as though there was always a conscious striving after suitable kinds of chain-molecules and methods of spinning them. That, of course, is not so. There must long have been the desire to imitate spiders and silk-worms by some process of extruding and coagulating viscous solutions—witness, for example, Hooke's whimsical suggestion, in his *Micrographia* (1664), of "a pretty Kinde of artificial Stuffe" that might be drawn into fibres—but until comparatively recently that seems to have been as far as it went. Success came empirically in the latter half of the nineteenth century with the discovery how to dissolve and resolidify cellulose and some of its derivatives ; and though it was recognized that the molecules of cellulose must be very large and that the high viscosity and " spinnability " of its solutions were bound up with this fact, it remains that people were wearing " artificial silk " before their benefactors properly understood what they were doing. The story would sustain a nice argument between those who contend that scientific progress reflects the demands of the age and those who hold rather that scientific advances actually inaugurate new eras. It is impossible to dissociate fibre science from a strong industrial urge, but likewise it is undeniable that researches into more and more complex molecules, particularly those of biological origin, were in any case reaching an exciting stage. The important point is that the two lines of approach have now run together into what in the end amounts to a single subject, the study of chain-molecules—and whether they are in hair or nylon, eggs or plastics, cabbages or kings, matters little.

In the biological world, as just said, fibrous structures, or what are effectively fibrous structures when we penetrate to the molecule themselves, are of the very nature of things ; and similar types of chains are used over and over again in all sorts of guises and groupings. Since, then, such chains, in the long trial of evolution, have been found worthy of so heavy a responsibility, the obvious first course in attempts to make fibres of our own would be to make further use of the self-same molecules, either by collecting them from natural sources or by synthesizing them. On the long view the latter procedure is the more satisfactory, but for the present our chemistry is not equal to the task, and we can do no more than refashion or remould existing raw material. This is the basis of the "regenerated" fibre industry—the science of isolating, controlling, and if necessary modifying, natural chain-molecules and building them into structures of our own design. In the meantime, however, pending the day when we shall have succeeded in synthesizing some of the more difficult components of ourselves and

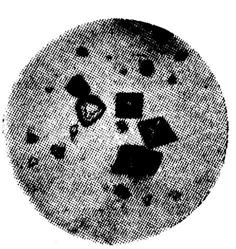


Fig. 2.—Microscopic crystals of edestin, the globulin from hempseed.

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* Published quarterly by Imperial Chemical Industries Ltd., London S.W.1., England.

other living creatures, there is no reason why we should not try to evolve other chain-molecules—simpler ones, of course—and make play with those, thereby at the same time generating new effects, over and above those already met with in Nature. This is the basis of the synthetic fibre industry—the science of making fibres "from scratch."*.

The two classes of regenerated fibres start, one from polysaccharides and the other from proteins.

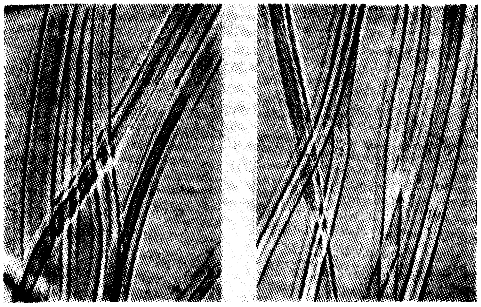
(a) (b)

Fig. 3.—Regenerated protein fibres : (a) from the arachin of peanuts, (b) from the casein of milk. (× 250)

(Photomicrographs by J. Manby, University of Leeds)

The polysaccharide-in-chief is cellulose, the main framework substance of the vegetable kingdom and the most abundant organic compound in nature. The cellulose molecule is a chain of hundreds or thousands of β-glucose "residues." Figure 1 will convey some idea of the actual shape of the unit that runs through the cellulose story. The chains themselves are very long and somewhat stiff, and in the more crystalline regions of the fibres they are stereochemically fully extended and are held together strongly by means of hydrogen bridges between hydroxyl groups.

There is no question of melting cellulose and redrawing it from the molten state as may be done with many synthetic high polymers : natural structures, such as wood, have to be broken down, purified from non-cellulosic constituents, and dissolved in special solvents such as our old laboratory friend, Schweitzer's reagent (cuprammonium). In the manufacture of viscose, the commonest type of rayon, the cellulose is brought into solution by a combination of caustic soda and carbon disulphide and regenerated by squirting through the fine holes of a "spinneret" into an acid bath. The regenerated cellulose molecule appears to be essentially the same as in the native state, except that it is likely to be shortened by hydrolysis at some of the bridges between the glucose residues. X-Rays show, however, that the state of side-to-side aggregation is different : the product is what is known as hydrate, or mercerized, cellulose, being crystallographically the same as that into which native cellulose is transformed in the well-known process of mercerization, which does not involve solution proper, but a mere swelling with alkali and water.

The properties of artificial filaments depend on the chemical constitution of the chain-molecules, and on the length, orientation, and regularity of the chain-bundles or "micelles." Strength, for instance, is a function of the degree of crystallinity and parallelism to the fibre axis. X-Ray analysis provides the best all-round help in keeping track of fibre properties in terms of internal arrangement, and the subject owes a great deal to it; but to feel happy in the field requires much more, a co-ordination of techniques and data that may be no more than hinted at in an article of this kind. The cellulose story alone is immense—filaments of cellulose and its derivatives are still overwhelmingly the commonest of man-made fibres—but briefly we may say that it falls into three parts. The first has to do with "straight" regenerated cellulose (products such as viscose, cuprammonium rayon, and so on), while the second is concerned with chemically modified cellulose, derivatives such as ethers and esters, the most notable example of which is acetate rayon. Substitutions in the hydroxyl groups of the glucose residues can, of course, give rise to a great range of molecular affinity, both between the chain-molecules themselves, leading to a variety of mechanical properties, and between the chains and accessory reagents—dyes, for example. It should be added that the uses of regenerated cellulose and its derivatives are not confined to fibre production: there is a considerable industry devoted to the manufacture of films, sheets, and other shapes.

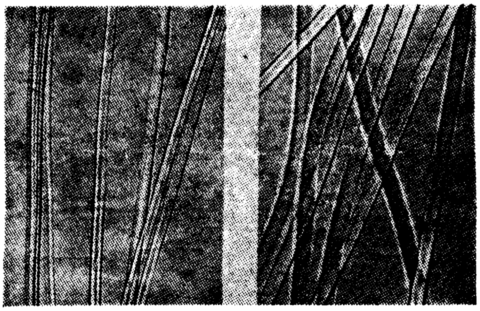
(a) (b)

Fig. 4.—Synthetic Fibres : (a) "vinyon," (b) nylon (× 250)

(Photomicrographs by J. Manby, University of Leeds)

The third part of the cellulose story is by way of being an intercalation on processes for imparting properties that are more the prerogative of the protein fibres. "Tebilizing," for instance, makes cellulose fabrics crease-resisting through an intimate incorporation in the fibre substance of the cross-linked chains of urea-formaldehyde resin, while so-called "animalized" rayons show certain protein dyeing properties by virtue of the presence of other synthetic polymers. This brings us now to the field of the regenerated protein fibres, in which the technological development finds much of its inspiration in a desire to imitate the natural protein fibre, wool, more closely still. The underlying scientific ideas derive mostly from the X-Ray interpretation of protein structure, and particularly from the X-Ray discovery of the general relationship between the fibrous and the crystalline, or "corpuscular," proteins.

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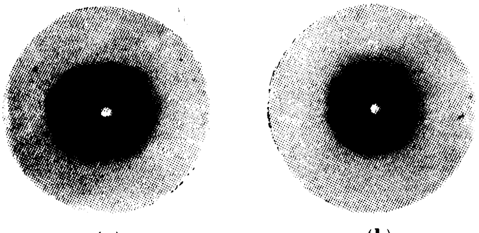
* It is perhaps unfortunate that there is as yet no agreed nomenclature for man-made fibres. The need for such agreement is likely to become more pressing as chemistry makes increasing advances into the realm of textiles. The words "rayons," "prolons," and "synthons" have been proposed for fibres of cellulosic, protein, and synthetic origin respectively : but these are not generally acceptable. A proposal to use the word "rayon" to cover all non-natural fibres is even less acceptable while the word "artificial" is felt in the textile trade to be derogatory. For the purposes of this article we accordingly fall back on the broad classification into "regenerated" and "synthetic."

The proteins are organized systems of polypeptide chains, alone or in combination with prosthetic groups. Whereas cellulose is a polycondensation product of β-glucose only and (except for end-groups) consists therefore of residues of a single kind, the proteins are polycondensation products of α-amino acids of widely different chemical functions whose residues have only the formula (-CO-CHR-NH-) in common. In the protein *fibres* the fully extended configuration is comparatively rare. It is found in natural silk (fibroin), for example, but in mammalian hairs the chains are normally in a regularly folded configuration (α-keratin), from which they are pulled out straight (β-keratin) when the fibres are stretched, and to which they return when the tension is removed. This intramolecular transformation is the basis of the long-range elasticity of a great family of fibrous proteins that includes, as shown by X-Rays, not only the keratinous fibres such as wool and so on, but also those of the epidermis, the elastic protein of muscle (myosin), and the blood-clotting protein, fibrinogen. All these have a similar shape of molecule that lies intermediate between the fully stretched form of silk and the highly folded forms of corpuscular proteins such as egg-albumin, hæmoglobin, edestin, etc. :



(a) (b)

Fig. 5.—X-Ray photographs of 'vinyon' : (a) stretched ; (b) contracted in steam to about one-fifth of its stretched length (Fibre axis vertical ; Cuka-rays ; D=3 cm)

When the intramolecular folds specific to a protein are irreversibly disarranged, the protein is said to be "denatured," and the science of making regenerated protein fibres consists in unfolding suitable corpuscular molecules by the action of denaturing agents and drawing out the liberated polypeptide chains into less folded, elongated configurations. Sufficient vestigial folds remain to endow the product with a long-range elasticity roughly analogous to that of wool. The denaturing agent may be an alkali or strong urea solution, and the viscous solution so produced is then spun into coagulating and hardening baths. The milk protein, casein, was one of the first to be converted into fibres in this sort of way—along empirical lines, however—but following the X-Ray elucidation of the process it is now known that many other corpuscular proteins offer themselves, particularly the seed globulins found in pea-nuts, soya beans, and the like. Figures 2 and 3 (*a*) and (*b*) will bring home the dramatic nature of the change from crystalline protein to soft, elastic fibres—incidentally, as striking a demonstration of the unity of the physical, chemical and biological sciences on the one hand, and of science and industry on the other, as may well be imagined.

The regenerated protein fibre industry is still in its infancy, and so is the synthetic, to which we now turn to complete this skeleton-like sketch of a tremendous body of knowledge and craftsmanship. Synthetic fibres are resins or plastics often spun from the molten state, and their production is an affair of modern chemistry and chemical engineering. Under appropriate physico-chemical conditions and with the aid of catalysts, it is now possible to synthesize chains many thousands of residues long. Favourite monomers are vinyl and vinylidene derivatives, which polymerize into chains. Not all such chains are fibre-forming in the best technological sense, however, because their physical properties in the mass depend on their length, the nature of the R-groups, and the temperature. Broadly speaking, good fibres are formed by long chains with not too much sideways asymmetry, though that is not the whole story by any means. Temperature is a very important factor—linear high polymers belong to the class known as "thermoplastics," and a product that is hard and brittle at low temperatures generally becomes plastic or rubbery at higher temperatures. What seems to have been the first commercial synthetic fibre is "vinyon" (figure 4 (*a*)), a co-polymer of vinyl chloride, $CH_2{=}CHCl$, and vinyl acetate, $CH_3\,COOCH{=}CH_2$. An X-Ray photograph of a specimen of "vinyon" that had been submitted to an extra stretching in the laboratory is shown in figure 5 (*a*), while figure 5 (*b*) is a photograph of the same specimen after exposure to steam. It is included to illustrate the property of thermo-elasticity, so characteristic of many linear high polymers. Above about 70° C (in the case of "vinyon") thermal vibrations disarrange the chain-molecules that at ordinary temperatures remain "frozen" roughly parallel to the fibre axis (see figure 5 (*a*)) : they coil up and the fibre rapidly contracts to only a fraction of its initial length. Figure 5 (*b*) shows the almost amorphous nature of the contracted state.

The most successful synthetic fibre to date is nylon. This is a class-name that has been given to polyamides formed by the repeated condensation of dicarboxylic acids and diamines, generally of the type $COOH{-}(CH_2)_x{-}COOH$ and $NH_2{-}(CH_2)_y{-}NH_2$. The acid and base commonly employed are adipic acid and hexamethylene diamine respectively. Nylon has an exceptionally low affinity for water, and it can be drawn into thicker filaments for tooth brushes and surgical sutures, for example, or into the finest fibres with the strength and resilience of natural silk. So outstanding are its properties that nylon is monopolized for the time being almost entirely for war purposes.

Textile Industry and Research

The Sir Walter Preston Scholarships and Fellowships Schemes

TEXTILE Machinery Makers, Ltd., 60, Huddersfield Road, Oldham, England, have lately announced the establishment of a scheme for the furtherance of higher education and research in relation to the textile industries. The scheme provides, in the first instance, for the expenditure of £35,000 over a period of seven years, the administration of the funds being vested in a board of trustees appointed by Textile Machinery Makers, Ltd., for that purpose. The object of the scheme is to increase in the textile industry in general, and the textile engineering industry in particular, the number of those possessing the highest possible qualifications in technology and experience in research.

To this end the trustees are empowered, within the limits of the funds at their disposal, to award a number of valuable scholarships and research fellowships to be known as "The Sir Walter Preston Scholarships and Research Fellowships" and tenable in the Faculty of Technology of the University of Manchester, or in such other universities as they may from time to time determine.

Undergraduate Scholarships

In the award of undergraduate scholarships the scheme makes provision for both works apprentices and other young persons and those who have just completed a secondary school education, and it is required that all holders of scholarships shall possess the necessary qualifications for entry upon a university course.

The scholarship awards will fall into three groups, as follows: Group I for works apprentices who have obtained the Higher National Certificate in mechanical engineering and who are eligible to enter upon the higher course leading to the Bachelor's degree with Honours; Group II for works apprentices who have obtained the Ordinary National Certificate in a textile or equivalent subject and who are judged to be capable of ultimately proceeding to a Bachelor's degree with honours; and Group III for secondary school leavers possessing the Higher School Certificate or such other qualification as will admit them to a higher course leading to the Bachelor's degree with honours.

The scholarships will be tenable, subject to satisfactory progress, for three years in the case of awards under Groups I and III and for four years in the case of awards under Group II: but the scheme provides for continued assistance in the case of a limited number of scholars who in the opinion of the university authorities show an aptitude for research.

The courses to be followed will be in textile engineering *or* mechanical engineering, *or* textile technology, *or* economics.

Post-graduate Scholarships

A small number of scholarships (Group IV) will also be offered to honours graduates in science or engineering in order to attract into the textile machinery industry or the textile industry some of those who would otherwise make their careers in other branches of industrial activity.

The normal tenure of a post-graduate scholarship under the scheme will be three years, so as to enable the holder to obtain a second university qualification in textile technology and to follow it by a year's research leading to the Master's degree.

Research Fellowships

Recognizing that from among those benefiting from the scholarship scheme as outlined above there may be some who show outstanding ability and aptitude for research, the trustees are empowered to award one or more research fellowships which will enable the selected candidate(s) from any of the Groups I to IV to continue in advanced study and research for a further period of two, three or four years.

The Number and Value of the Awards

The number of awards of scholarships in the various groups and of research fellowships when the candidates become available may be varied from year to year at the discretion of the trustees and awards may be withheld if, in the opinion of the selection committee, the candidates presenting themselves are not of sufficient merit.

During the first year of the scheme's operation the following awards will be offered:—

Undergraduate Scholarships, Group I	Five
Undergraduate Scholarships, Group II	Three
Undergraduate Scholarships, Group III	Two
Post-graduate Scholarships, Group IV	One

In succeeding years further awards will be offered of which due notice will be given.

In deciding on the scale of assistance to be given under the scheme, the Directors of Textile Machinery Makers, Ltd., have been guided by two main considerations: (1) compensation for the sacrifice of freedom to engage in remunerative occupation, and (ii) the desirability of enabling all scholars to play a full part in the social, athletic and other extra-curricular activities which form an important part of university life.

The values of the various awards provide for increases in the emoluments during their tenure, and, subject to such variations as the trustees may consider desirable in the light of special circumstances, will be as given above.

Year of tenure :	1st	2nd	3rd	4th	5th
	£	£	£	£	£
Under-graduate Scholarships, Group I ..	250	275	300	300	....
Do. do. Group II ..	225	250	275	300	300
Do. do. Group III ..	200	225	250	250	..
Post-graduate Scholarships, Group IV ..	300	300	350	....	....
Research Fellowships	400	450	500	550	....

Conditions

The awards will be made on the recommendation of a selection committee appointed by the trustees and assisted by the advice of the head(s) of the university department(s) in which the scholars will pursue their studies.

In making their recommendations the selection committee will be guided not only by the candidate's scholastic records and testimonials submitted, but also by the results of interviews.

All undergraduate scholars will be required to live in one of the university halls of residence provided there is accommodation available.

The trustees may discontinue the award in any case of unsatisfactory progress or discreditable behaviour.

The award of scholarships in Groups I and II is restricted to candidates nominated by the constituent companies of Textile Machinery Makers, Ltd.

Applications for scholarships under Group III must be accompanied by a recommendation in writing from the applicant's headmaster, together with one other testimonial, and should give all the information necessary to enable the selection committee to judge the candidate's suitability for an award.

Applications for the post-graduate scholarship must be accompanied by a recommendation from the head of the department in the university in which the applicant has graduated, together with the names of two referees.

The scheme will come into operation for the university session commencing October 1945.

Shrink-proofing of Wool

ACCORDING to a patent recently granted to the American Cyanamid Co. (E.P. 562,977 of 1942, acceptance date 25th July 1944) treatment of wool with alkylated methylol-melamine, e.g., methylate methylol melamine, greatly reduces felting and shrinking. The fabric is first impregnated with the resin, dispersed in water or other suitable medium, and the resin then "cured" in situ. The curing time can be shortened by the use of a catalyst, e.g., oxalic acid, diammonium hydrogen phosphate, etc. It is claimed that fabrics dyed with acid and chrome colours are not affected by the treatment.

Cotton Spinning 11

Hopper Bale Breaker and Hopper Feeder

By JAMES H. DAWSON, F.T.I.

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IN our last instalment we dealt with the importance that should be attached to the process of mixing the cotton from the bales (which have been put out *for* the mixing); how the pressed "slabs" of cotton should be broken up into small pieces and thoroughly distributed throughout the stack which is being formed; whether a stack mixing was made, and the cotton fed therefrom, or whether the bales were run direct through a bale breaker and combination, and the cotton processed straight from the bales, and through the opening and lapping machinery, the same principle of proportioning the variations in the bale contents should be observed.

These remarks are necessary because (as will be seen from the illustrations) the modern methods of mixing having become more mechanical; therefore, in order to obtain full advantage of what we may term this "mechanical mixing," the careful selection or examination of the bales must precede such operation. It is, therefore, usual, under the new system, as a preliminary to the actual mixing (and if space allows of it in the cotton godown, or warehouse) to separate by a careful sampling system, every lot of cotton that is required for immediate use.

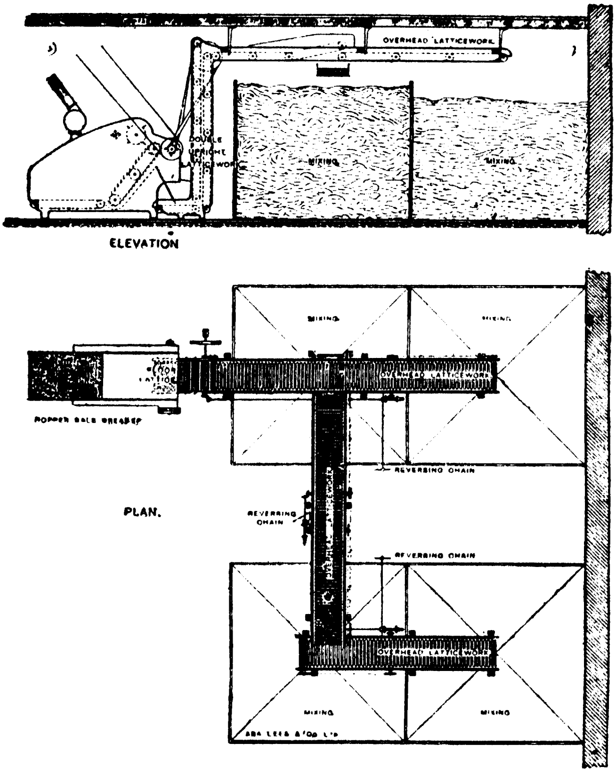
A very popular method is to divide the consignment of cotton bales (after such careful sampling) into several lots, say, No. 1 Lot, No. 2, No. 3, and No. 4.

No. 1 *Lot* would include all the bales under a certain staple length, which were also under a certain standard of cleanliness.

No. 2 *Lot* would be comprised of the bales which would match No. 1 lot in staple but were cleaner or more free from broken seed and leaf.

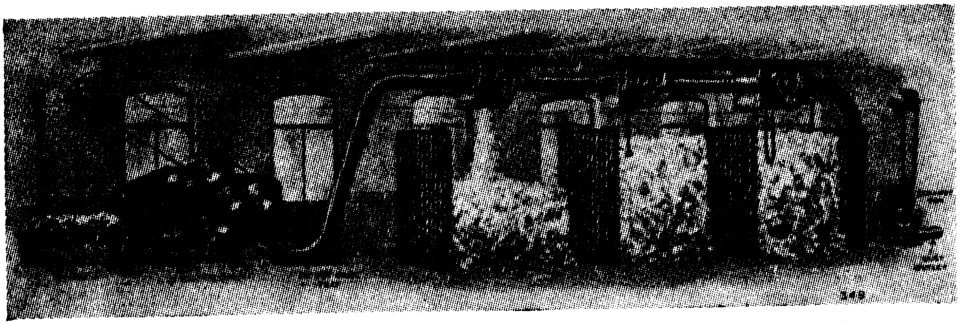
In his No. 3 lot he would have the dirtiest bales that were of longer staple than the No. 1 and No. 2; and in his No. 4 lot the cleaner bales same staple as No. 3.

Having thus classified his purchases, he would ascertain the proportions of the respective lots. Say that from a 100-bale lot there were 20 No. 1s, 30 No. 2s, 40



(*By courtesy of Asa Lees*)

Fig. 1. Distributing Lattices for Mixings



(By courtesy of Dobson & Barlow Ltd.)

Fig. 2. View of Modern Mixing Plant

No. 3s and 10 No. 4s. he would probably give instructions to mix them thus:—

2 bales No. 1
3 ,, No. 2
4 ,, No. 3
1 ,, No. 1
——
10

That would constitute the basis of his mixing, and the next point would be to see that these proportions were run into the yarn.

Whether a stack mixing was made and the cotton fed therefrom—or whether the bales were run direct through a bale breaker and combination, and the cotton processed straight from the bales and through the opening and lapping machinery, the same principle of proportioning the variations in the bale contents should be observed.

In a previous instalment we fully discussed the principles involved in hand mixing. By that we mean the laying down of the bales of cotton near the space whereon the stack of cotton is to be built, and the forming of the stack itself. Mechanical mixing and stack forming has now almost entirely superseded the older system.

The mechanical breaking up of the cotton is accomplished by " bale breakers" of different types; and the stacks are formed by means of either mechanical systems, or by pneumatic systems of conveyance of the broken up cotton from the bale breaking machine to the position where the stack is to be made.

The illustration (Fig. 1) shows the cotton being conveyed from the bale breaker by means of travelling lattices, to be deposited in its mixed and broken up condition into the " railed off " spaces provided for the purpose, which are generally termed " Mixing Bins."

Fig. 2 shows the alternative system of conveyance by means of exhaust suction fans.

In both systems provision is made for the removal of a large proportion of the dust, etc., which arises from the " tossing about " and the pulling of the cotton during the process. In one case also may be noticed at the connection of the bale breaker to the conveying trunk or pipe, a " rivet trap." This is intended to obstruct and retain anything that is likely to cause damage to the machinery through which the opened cotton will have to pass in subsequent processes.

In some cases damage is caused by short pieces of garth iron, in others by rivets which have become disconnected from the garth irons which surround the bales of cotton. Arrangements are also provided for reversing or changing the course or direction of the flow of the cotton, from bin to bin according to the requirements of the operation.

Nowadays when (as previously pointed out) hand mixing is being superseded by the " straight through system," the bale breaker does all the pulling, and riving, or tearing.

The original styles of bale breakers were constructed upon the " roller drafting " principle. Layers of cotton from each bale in turn were lifted about three feet from the ground or floor, and placed upon a short travelling lattice. This lattice conveyed the cotton to the first of four pairs of rollers.

Coarse fluted pairs, and pairs containing short spiked teeth, worked in conjunction, each pair running at a greater circumferential speed than its predecessor;

the differential speed being the factor depended upon to disintegrate the compressed mass. It is obvious that the pressure required upon one pair of rollers to hold the cotton secure whilst others were pulling it asunder, would have to be considerable; and that the strength of the machine parts, as well as the "horse-power" absorbed was very great in proportion to the work done. As the principle in this system necessitated tearing the pieces apart while held in compressed form, the resistance was naturally greater than would obtain otherwise.

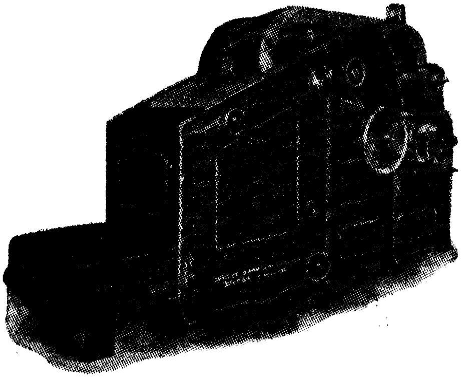


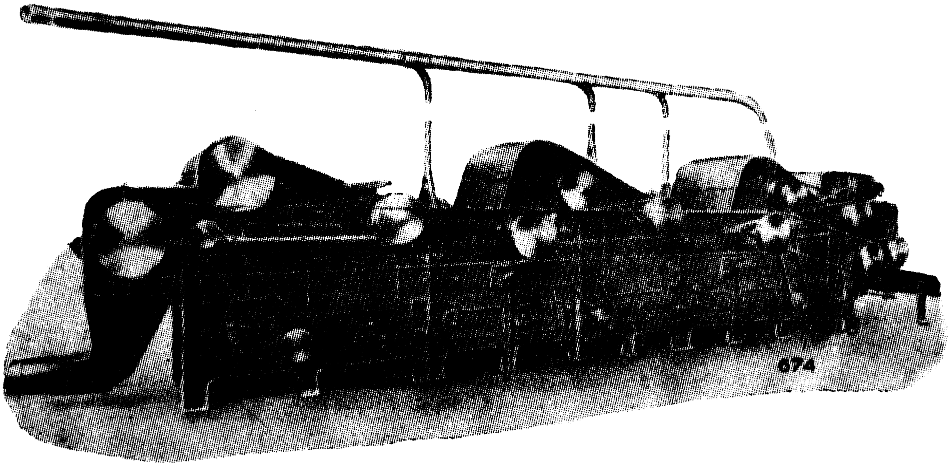
Fig. 3. Hopper Bale Breaker (Lattice End)

A greatly improved system is that in practice at the present time; the "cakes" of cotton are now treated quite differently. Instead of tearing at them and squeezing them at the same time, they are allowed to roll about in a hopper, while short strong spikes remove portions from their outsides.

Hopper bale breakers, therefore, are the modern substitute for the hand pulling of the cotton mixer. Originally it was usual to have to lift the layers of cotton, and drop them into the hopper over a front rail about 3′-6″ in height. This is still done in many cases. For a man to feed about 30 or 40 bales per day in that fashion, he would have (in addition to tearing the layers from the bales) to raise them over the front rail. Forty bales treated thus would represent about 70,000 foot lbs. of work. Much of this labour is now avoided by the use of the low-fronted hoppers.

In some cases these are so arranged that a travelling lattice, which runs as near to the floor as practicable, carries the cotton straight inside the hopper.

It will be seen that not only have the designers of the latest machines, reduced the work required from the mechanical point of view, but they have at the same time reduced the manual labour. Once the cotton gets inside the hopper the short strong spikes commence to operate upon it. The spikes are fixed in wood laths or ribs which extend the width of the machine. They are arranged at suitable distances apart, and riveted upon leather belts about $2\frac{1}{2}''$ wide. When these belts are connected at the ends they constitute an endless lattice of protruding spikes. The lattice is passed around shafts fitted with suitable round iron blocks, or small



(By courtesy of Dobson & Barlow Ltd.)

Fig. 4. Showing Treble Hopper Bale Breaker

solid pulleys, upon which the leather belts may rest, and when the lattice is stretched tight, and the supporting shafts are caused to revolve, the spiked lattice will naturally travel in any desired direction. The direction is upwards for that part of the lattice facing the cotton in the hopper, and the spikes are inserted in the wood ribs at such an angle that as the cotton comes in contact with them they comb out whatever they can.

The "Evener Roller"

The combed out portions adhere to the spikes until they are nearing the top roller. At this point there is fixed what is termed an "evener roller" of which there are many different types. The function, however, is the same in every case, i.e., to knock off the spikes of the lattice any pieces of cotton which are not considered sufficiently small in size. These fall back again into the hopper, eventually to be taken up once more by the spiked lattice. Those pieces which pass the evener roller remain upon the spikes until when the lattice is descending on its return journey, the angle of the spikes gradually changes until at a certain position where the points of the spikes are commencing to dip, they have to pass another revolving roller, generally called a "batter" or "clearing roller." This roller revolving rapidly, and being provided, (in most cases) with leather flaps, or "batters" clears the spikes of the tufts of cotton, which are then passed forward in the machine.

Grid bars are usually interposed at any convenient position between the clearer roller and the outlet of the bale breaker. Through these bars much foreign matter falls, and is thus removed from the material. It is usual to run the cotton at once into another machine after being opened in this fashion. The general practice is to put it through a hopper feeder, but the methods of connecting the two machines, may vary according to circumstances, requirements, or personal opinions.

The hopper feeder is a machine, exactly alike in principle with the hopper bale breaker, and although it is the second machine in the series now, it was really the forerunner of the hopper bale breaker; therefore, it seems more fitting to say that the hopper bale breaker is simply built stronger than the hopper feeder, than that the hopper feeder is built lighter than the bale breaker. From the hopper feeder the cotton may pass into the blowing room machinery or it may still pass into and through another hopper feeder. In any case, when it is allowed to pass away from the control and action of the hopper feeders, it may be conveyed, either by means of pneumatics or by way of travelling lattices, to the feed end of the exhaust opener.

In dealing with the subject of cotton spinning so far we have tried to emphasize the importance of efficient "breaking up" of the cotton from its "baled pressure" condition in order to allow of its better and more satisfactory mixing in after processes.

The illustration Fig. 3 is of a bale breaker with the low lattice feed (already described) and suction arrangements for the removal of dust from the inside of the hopper. In Fig. 4 we get a *triple-hopper bale breaker* with arrangements for removing the dust from the hoppers, also a pneumatic arrangement for conveying the broken up cotton to its next process, whether it may be a mixing stack, or direct into the opening and lapping machine.

In the treble-hopper bale breaker we are provided with a machine, which fulfils completely the mixing-master's constant order, "pull it into small pieces."

Importance of Rationalization

"The object of rationalization is the lowering of the cost of goods . . . if things cost less people buy more of them; when people buy more things, still more things are made, and when more things are made more men are employed . . . Even when mills make a profit it is not necessarily an indication that the last stage in efficiency has been reached. When the textile industry in competing countries has been highly rationalized, it behoves us to introduce rational policies by deliberate planning and by improved organization so as to make our mills fully co-ordinated units." (SIR SHRI RAM, Kt., in the GOLDEN JUBILEE SOUVENIR of the *Indian Textile Journal.*)

Design of A Picking Tappet

By S. S. AHLUWALIA

(*Specially Contributed*)

In the smooth working of a loom, the picking motion plays a very important role. The smoothness of picking depends upon the suitable and proper design of the picking tappet and also on the mechanism used to transmit picking from tappet to the shuttle. There are a few conditions that must be satisfied for good picking.

(*a*) The shuttle should move in the desired way, that is, it is to move from its extreme position without developing any jerks or impulses. At first the shuttle will slide and then it will be accelerated in the desired way to attain the maximum velocity with which it is to cross the shed.

(*b*) The desired shuttle velocity is not to be affected by the fluctuation in the loom shed. The shuttle should not fail to reach in the other box, in case of drop in speed and should not rebound in the box in case of increase.

(*c*) All these actions should be positive.

All the above conditions are difficult to be brought about *in toto*, yet attempts are being made to achieve a part of them, if the whole cannot be secured. The most important of these three conditions is the first one and this is solely solved by the proper design of the picking tappet. Our purpose is to design a tappet and then discuss the effect on it by: (*a*) picks per minute of the loom, (*b*) weight of the shuttle, (*c*) length of the shuttle and (*d*) reed space of the loom.

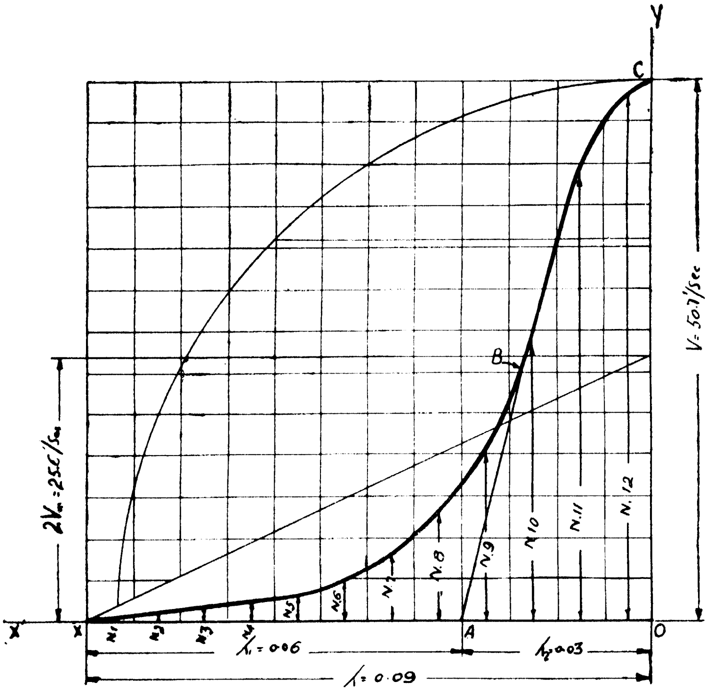
Let us take a concrete case for the sake of simplicity.

R_s = Reed space of the loom = 56.
N = Picks per minute = 170.
λ = Time for development of pick = 90° of crankshaft revolution.
W_s = Weight of the shuttle = 10 ozs.
θ = Angular movement of the crank.
L_1 = The distance between central line of picking shaft to mid of picking bowl.
L_2 = The effective length of picking stick.
ψ = The effective angle moved by the picking stick or picking bolt group = 36°.
θp = Degrees of crankshaft while the shuttle is in the shed = 110°

Before going into the calculations, let us describe the desired motion of the shuttle.

It can be divided into three classes:—

(*a*) Tightening of picking bend.



Time Velocity Curve for Picking Time 1″ = 0.015 secs; Velocity 1″ = 10′/sec.

(*b*) Moving of the shuttle from its zero velocity to near about the mean velocity.

(*c*) From its mean velocity to maximum velocity. This last part is like a simple harmonic motion, as for this type of motion, the accelerating force is least at maximum velocity.

The velocity of tappet throws back the picking bowl in the designed way and so makes the picking shaft and picking stick move in the same manner, by which the movement of the picker and the shuttle takes place. The maximum velocity in the shuttle is developed and with it it crosses the shed. There is a drop in velocity due to retardation of sley inertia and the friction of the warp. At the middle of sley, the velocity in the shuttle is nearly its average velocity. Now for the maximum velocity of the shuttle, we have

L_w = The distance that a shuttle has to move independently.
= Reed space plus length of shuttle − 6.
$= 56+13-6=63'' = 5.25'$.

The shuttle generally remains in the shed for 100° to 120° of crankshaft revolutions. It is in shed for less time in case of narrow looms and for more time in case of wider looms.

t_a = Time in seconds for the shuttle to cross the distance L_w

$$= \frac{\theta_P}{6N} = \frac{110}{6 \times 170} = \frac{11}{102} \text{ seconds}$$

Average velocity =

$$\frac{\text{Distance}}{\text{Time}} = \frac{L_w}{t_a} = \frac{5.25 \times 102}{11}$$

$$= 48.5 \text{ ft./sec.} \quad \ldots \quad \ldots \quad (1)$$

K.E. = The energy in the shuttle at the max. velocity.
= Energy in the shuttle at average velocity plus last energy in moving half the distance.

The energy in the first case is =

$$\frac{1}{2} \times \frac{W_s}{g} V^2$$

$$= \frac{1}{2} \times \frac{10}{32.2 \times 16} \times \frac{(48.5)^2}{1} = 23.10 \text{ ft. lbs.}$$

For the second case take retardation fr = 24 ft. per sec. per sec

The energy lost in moving half the distance.

= Retarding force x distance.

$$\frac{24 \times 10}{32 \times 16} \times \frac{5.25}{2} = 1.30 \text{ ft. lbs.}$$

Therefore, K.E. = 23.10 + 1.30 = 24.40 ft. lbs.

$$\text{and } V = \text{maximum velocity} = \sqrt{\frac{2g \times K.E.}{W_s}}$$

$$= \sqrt{\frac{2 \times 32{\cdot}2 \times 24{\cdot}40 \times 16}{10}}$$

$$= 50.70 \text{ ft./sec.} \quad \ldots \quad \ldots \quad (2)$$

λ = Time for development of picking = 90 of crankshaft revolutions. Therefore, time in seconds.

$$= \frac{90}{360} \times \frac{60}{170} = \frac{3}{34} = 0.09 \text{ sec.} \quad \ldots \quad (3)$$

To proceed with the design now, the following data are at our disposal.

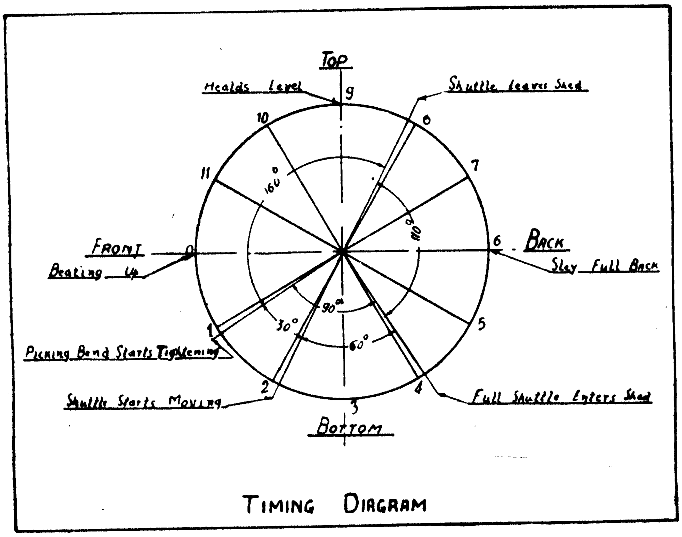
(*a*) The maximum velocity of the shuttle is = 50.7 ft./sec.

(*b*) The time for development of picking = 0.09 sec.

(*c*) Each stage will take one-third of total time.

(*d*) The last one-third will develop like a part of simple harmonic curve.

The construction can be divided in two parts:

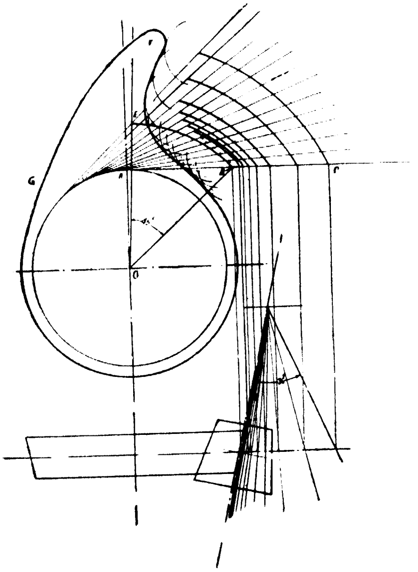


TIMING DIAGRAM

(*a*) To find out the time—velocity curve for picking.

(*b*) To design out the profile of the cam.

To find out the Time-Velocity curve for picking.—Draw two lines OX and OY, perpendicular to each other. With O as centre and 50.7 ft. in a certain scale as radius, mark off a quadrant of a circle. Divide this quadrant in four equal parts and then draw projections of these points on OY. Mark off OX from OX′, to show 0.09 sec. in a certain scale. Divide OX in three equal parts and then each part further in four equal parts. From each point of division draw parallel lines to OY.



Design of Picking Nose Profile

The line within the last part of OX, that 2 will cut lines from the circle. Draw a curve ABC joining all these points. The line ABC is S.H.M. curve with maximum velocity of 50.7 ft. sec. The upper part of curve ABC is Time Velocity graph from the last part of the tappet. For the first two-thirds of Time Velocity graph proceed as follows:—

Let L_2=Effective length of picking stick =22″

V_m=average velocity of picking stick

$$= \frac{1}{12 \text{x} 0.09} \times \frac{L_2 \text{x} 2\pi \text{x} \psi^{s^\circ}}{360}$$

$$= \frac{22 \text{x} 2\pi \text{x} 36}{12 \text{x} 360 \text{x} 0.09} = 12.8 \text{ ft. xe}$$

Mark off 2 Vm as OE on OY. Join XE. The triangle XEO has area equal to the area to be covered by picking Time-Velocity curve to be drawn. Therefore, some area under the triangle will be excluded and some included. The last part of the curve is already known. With the help of squares or rectangles a rough idea of the area to be included can be had and a curve XB be drawn excluding the same area and joining XB without any abrupt rise. Thus XBC can be drawn out.

Divide the time base in 12 equal parts and then from mid points of these divisions raise ordinates, N_1, N_2, N_3,—N_{12}, these ordinates give the velocity ratio at a particular instance. The picking bowl also will move in an angular way in the same ratio. Below are tabulated results from the figure of time-velocity curve.

N^1	0.05	1	0.09
N^2	0.10	2	0.19
N^3	0.15	3	0.29
N^4	0.20	4	0.39
N^5	0.25	5	0.49
N^6	0.40	8	0.76
N^7	0.70	14	1.37
N^8	1.15	30	2.90
N^9	1.80	36	3.53
N^{10}	3.00	60	5.88
N^{11}	4.80	96	9.31
N^{12}	5.50	110	10.78

The velocity of shuttle at a particular instance can be had from the formula V =

$$\frac{2\pi L_1 Ni \times \lambda^\circ}{180^\circ \times \theta \times L_2} \times \frac{Ni}{N_1 + N_2 + N_3 \,\&\text{—-}Ni}$$

The formula is deduced as follows:

$$\text{Velocity} = \frac{\text{Distance}}{\text{Time}}$$

Time for the movement of stick

$$\frac{60}{N} \times \frac{2\theta}{360} = \frac{\theta}{3N}$$

$$\text{Time for the ith division} = \frac{\theta}{3N_i}$$

$$\text{Distance} \text{ ——} = \frac{L_1}{L_2} \times \frac{\lambda^\circ \text{x} \pi}{180}$$

The distance moved in the ith division

$$\text{of time} = \frac{L_1}{L_2} \times \frac{\lambda^\circ \text{x} \pi}{180} \times \frac{N_i}{N_1 + N_2 + \text{—} + Ni}$$

$$\text{Velocity} = \frac{2\pi L_1}{L_2} \times \frac{Ni \times \lambda^\circ}{180 \times \theta} \times$$

$$\frac{Ni}{N_1 + N_2} + N_3 \,\&\text{———} + Ni$$

To draw the profile of picking tappet.—Draw a circle with OA as radius, showing the height of the centre of cone above the tappet shaft centre. Through A draw a horizontal tangent ABD. Divide the arc of the movement of the picking bowl, which is 36° in 12 parts in the ratio of N_1, N_2, N_3——N_{12}. Set off angle BOE =45° which is the time for development of picking. Divide the arc BE in 12 equal parts and from each point draw tangents. These tangents show the different positions of tangent ABD that it will occupy during 12 intervals. Draw projections from different angular positions of picking bowl on the tangent ABD. With O as centre, mark off different positions of bowl centre on the tangents. From each point draw circles with radius equal to the bowl section at mid point. Draw a curve touching all these circles. At F make a small circular curve to have a rounding. This curve is the profile of the picking tappet which is required. After touching the F, the bowl will fall somewhere at G. See figure.

Picking per minute of the loom.— In the formula the velocity of the shuttle is directly proportionate to the loom speed. For higher loom speed the velocity will be higher and consequently less time. The time velocity curve for picking will be steeper and in case of low speed, the velocity is also low and the curve will be very gradual.

Weight of the shuttle.— If a shuttle has more weight, then it will have more drop in velocity, which means that the retardation acting on the shuttle is more. The maximum velocity of the shuttle will not be the same as required.

In the weaving sheds which have no fixed standard of shuttle weight the heavy-weight shuttles become a nuisance for the jobber. Though the picking tappet is not meant for the shuttle supplied, yet he has to use it and he does it by advancing the picking, instead of intensifying it. On account of this the picker strikes heavily on the buffer and the picking shaft is subject to bending moment. In such a shed the picking shaft breakages are bound to be more. It is very important that the shuttles of the same weight should be used for which the tappet has been designed.

Length of the shuttle.— For longer shuttles, the boxes are also elongated. In this case the picker and shuttle will have contact for a longer time, that is, angle θ is more in this case, and it will have throw of the tappet bigger one. But if a longer shuttle has more weight, the gain in velocity may be balanced by drop on account of weight.

The longer shuttles will not only have less danger of fly-out, but also, they will carry more weft, thereby reducing the stoppages.

Reed space of the Loom.— More reed space means more distance for the shuttle to travel, for which more time is allowed. The shuttle should have higher velocity and bigger angular throw for the picking bowl, that is, bigger throw of the tappet. Generally, sizes of tappets are based on sizes of loom, such as narrow, medium and wide.

Industrial Worker in India

(*Concluded from page* 704)

important it is to be clean and neat, and the children too are made to wash, bathe, and keep their persons neat from top to toe. This is repeated daily till the habit of cleanliness becomes firmly ingrained in them. Each month a *Cleanliness Campaign* could be held to encourage this good habit. The youngsters especially are sure to participate enthusiastically and keep their rooms and surroundings clean and above reproach by sweeping, removing refuse, etc. If prizes are offered to the three best-kept homes it would be a great inducement in achieving the desired result, for the virtue of cleanliness, we are told, is next to godliness. The health and well-being of these industrial workers should be the concern of the Social Worker and Labour Officer, who should guide and direct them to a better way of life. In times of illness they should direct them to the dispensary maintained by the mill. The women could be taught how to feed their families *cheaply and adequately* on a balanced diet. Thus the aim of this educational programme would be to make these workers better husbands, wives, mothers, *and* citizens.

The Rotproofing of Heavy Textiles*

THIS paper is concerned with the protection of military stores against destruction by rot and decay caused by fungi and bacteria. Although timber is greatly damaged by these agencies, the work so far carried out has been confined chiefly to textiles.

The climatic conditions of Burma and Assam, in which Allied troops are operating, are particularly favourable to fungal and bacterial growth. It has been found that in such areas, heavy textile stores such as tentage, camouflage nets, sandbags, ropes, cordages, waterproof paulins, portable river-crossing equipment, etc., are rendered unserviceable in a month or two, unless deterioration is retarded by an antiseptic or rotproofing agent.

Most of the textiles concerned are made from either jute cotton or hemp, and although there are many well-known fibre rotproofing treatments, their adaptation in the present emergency has been governed by considerations of supply. The utilization of indigenous or more readily available materials has thus been of prime importance.

Nature of Microbiological Degradation

Before considering the question of protective treatments, the nature of the fibre damage caused by microbiological agencies may be briefly discussed.

Cotton is almost entirely pure cellulose, and Norman prescribed cotton cellulose as the reference standard for his work on cellulosic fibres, since cotton cellulose itself is composed solely of hexosan (polyglucoseanhydride) molecules. The cellulosic framework of jute, hemp and other bast fibres contains also some lignins, complex aromatic derivatives, akin in some respects to the tannins, and similarly resistant to microbiological attack, as well as varying proportions of a cellulosan, xylan (polyxylose anhydride). The structural formula of the hexosan and xylan fractions of a typical bast fibre show a close resemblance (Fig. 1).

It has been established that the tensile strength of the fibre is related to the chain length of the individual molecules, and that maximum strength is achieved in chains of approximately 2,000 glucose residues. Xylan molecules are considerably shorter than those of cellulose, and hence their presence will adversely influence the tensile strength of the fibres.

Moreover, xylan is more sensitive to the action of dilute acids and alkalis than pure cellulose. Thus, jute and hemp are more sensitive than cotton to chemical treatments. Norman has shown that part of the cellulosan (xylan) is stripped by immersion even in very dilute cold alkaline solutions, and that the proportion of xylan removed increases with increasing concentration of the alkali. Furthermore, even mild acid treatment affects hydrolysis.

It is therefore possible that the mechanical strength of a fibre rich in xylan will be more adversely affected by chemical treatment than one of low xylan content such as cotton or ramie. These aspects must receive consideration when recommending a rotproofing treatment for bast fibres, and the proportion of cellulosan in the cellulose itself is a significant factor. It is also important that the general treatment given to the fibres should be so formulated as to preserve the intrinsic characteristics of the fibre, if maximum resistance to microbiological attack is to be retained.

The actual microbiological destruction of the textile material is due to enzymes which are secreted by the attacking microorganisms, and the progress of enzymatic degradation of cellulose is similar to mild acid hydrolysis. Certain diffusible degradation products are assimilated by the micro-organisms.

Blocking of the hydroxyl groups of the polysaccharide, e.g., by acetylation, etc., renders the molecule immune from attack. This freedom may arise, either because the chemically modified polymer is now resistant to enzymatic degradation, or alternatively, because the possible breakdown products can no longer be assimulated by the attacking organism.

An important ancillary factor arising from this is the preservation of fibres against termite attack. There is some evidence that cellulosic fabrics become

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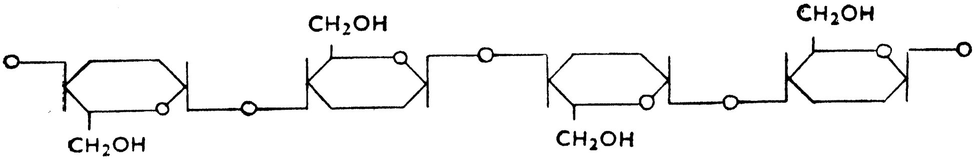
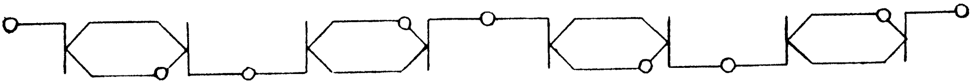


Cellulose



Xylan

FIG. 1

increasingly attractive to termites after microbiological attack has initiated the degradation of the cellulose to less complex substances; hence a good rotproofing treatment should also confer some protection against termite attack. This is the case with chemical methods of modifying the fibres, such as acetylation or cuprammonium proofing (Willesden treatment).

Rotproofing may be defined as the protection of the textile fibre against attack by micro-organisms. The most important single factor in the degradation of cellulose is high humidity, and both fungi and bacteria participate in the attack, fungi usually attacking cellulose at a lower moisture content than bacteria.

The susceptibility of the fabric to attack is increased by the nature of the sizing and finishing preparations used, since these themselves act as culture media. Rotproofing can therefore be considered from two aspects:—

1. Rotproofing of the fibre.
2. Incorporation of antiseptics in sizing, finishing and waterproofing treatments.

Fibre Rotproofing Treatments

The chart Fig. 2 gives a classified list of the more important rotproofing treatments, which are being considered for use in India.

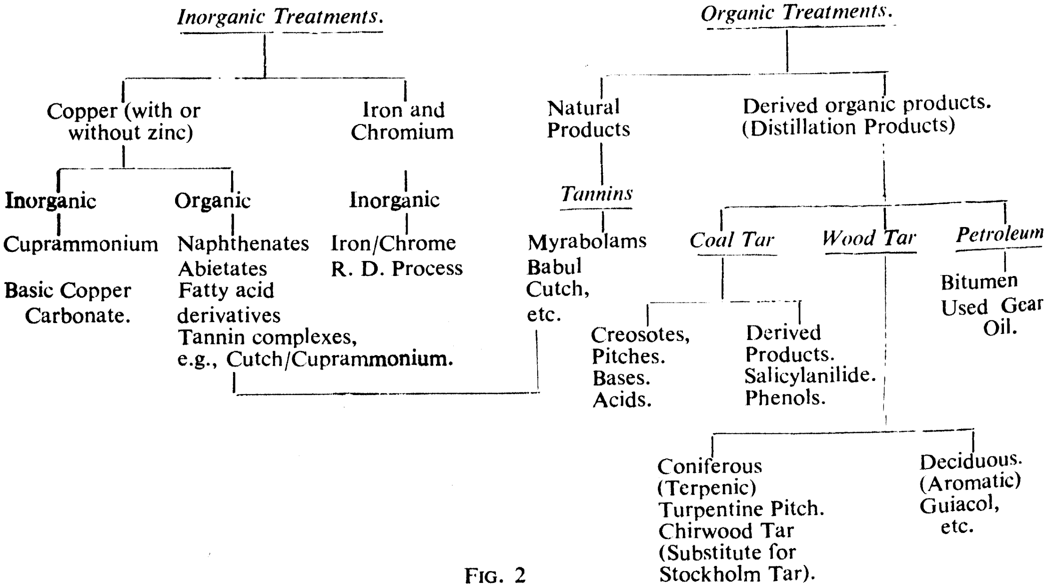


FIG. 2

The relative values of these treatments have been ascertained experimentally, both here and elsewhere.

It has been confirmed that copper, applied in almost any form, constitutes one of the most powerful methods of control of micro-biological attack. The potency of the copper varies somewhat with the nature of the compound applied.

Copper in some form, however, whether inorganic or organic, is almost essential for any general large-scale textile rotproofing schedule. Zinc also possesses these general fungicidal properties, although it is only about one-fifth as toxic as copper.

Iron and chromium, when combined on the fabric to give a mixture of complex ferric and chromyl chromates, as in the Iron/Chrome method of rotproofing, are excellent ; iron and chromium, however, differ from copper and zinc, in that their inhibitive action appears to function only in certain inorganic combinations. Thus, in a vegetable dyeing technique using a tannin, mordanted on to the fabric with iron and chromium salts, very little protective effect is afforded against microbiological attack. If, on the contrary, copper is present as in the well-known Cutch/Cuprammonium treatment, the rotproofing effect is very good.

The tannins themselves are resistant to microbiological attack, but are unable to confer adequate resistance to a fabric unless present either in excessive amounts or mordanted with copper.

The neutral coal-tar distillation fractions, having boiling ranges above about 240° C., are very good inhibitors. Of the wood tar products, Stockholm tar is too well known to need more than mention. Bitumen again has been used for years for preserving paulins and other similar stores.

Almost all these treatments require chemicals which are in short supply in India and the problem has been to conserve such materials as copper and creosote by partial substitution with indigenous substances. As already indicated, the recommendation of any treatment is governed by many factors, including :—

Availability of the chemicals required,
Ease of application, e.g., plant and technical supervision necessary.
General effect of the treatment on the serviceability of the store, e.g., colour, weight, handle of the fabric, fire hazard in processing and on storage, and
General effect on the intrinsic properties of the fibre.

A further factor to be considered in planning a rotproofing treatment is the effect of actinic rays, since certain metallic derivatives tend to accelerate catalytically the degradation of cellulose polysaccharides by the action of sunlight.

A considerable amount of investigation has been carried out in these laboratories on the utilisation of indigenous materials. Thus in view of the shortage of imported synthetic dyestuffs, and the resultant impetus given to vegetable dyeing, it was decided to experiment on the possibility of evolving a rotproofing/dyeing technique, by a simple modification of the current vegetable dyeing procedure. The tinctorial and preservative properties of indigenous tannins were determined using different mordants. As a result, it has been possible to formulate a process for vegetable dyeing to an approved camouflage shade, having a certain copper content, and a rotproofing effect which renders the goods very serviceable. In addition, the presence of the copper increases the light-fastness of the shade. The adaptation of this technique means that not only are the dyeing and rotproofing effected in one operation, but also the shade may be modified at will, and the actual amount of copper used is less than in a normal copper rotproofing treatment, since the fixative action of the tannin also exerts a protective function, and the copper complex is sufficiently stable to withstand leaching losses to a considerable extent.

In addition to rotproofing processes for application to textile fabrics in the course of manufacture, it has also been necessary to develop methods for the treatment of vast stocks of textiles already fabricated, which had not previously been rotproofed. Several simple methods of treatment for use in operational areas have been developed. Thus, a very effective rotproofing treatment consists in the application of a plasticised pitch, applied hot. Another effective measure is to use an emulsion of used gear oil, which is always available wherever there is motor transport. Bituminous emulsions which ‘ break ’ when applied to a plane fabric surface, to give an impervious coating of bitumen on the fibres, are also very successful, and have the added advantage of conferring a serviceable camouflage shade. These treatments constitute very useful maintenance measures for pitched tents, sandbag revetments and similar semi-permanent structures.

Microbiological damage may arise through initial attack of superficial dressings, as well as by direct action on the fibres. If, therefore, a fibre or fabric is to be dressed with a size or waterproofing mixture, it is necessary to incorporate an antiseptic in the dressing. For sizes based on polysaccharides, salicylanilide is the first choice, but since this compound is imported, and is moreover, a derivative of phenol and of aniline both of which are reserved chemicals, it was necessary to suggest an alternative for certain demands. It was found that a mixture of sulphur with a copper salt such as the sulphate or basic carbonate, was useful.

Where proteins are present such as glue and casein, metallic derivatives are ruled out, being protein precipitants, and strongly polar compounds cannot be used because of the amphoteric nature of the protein. Organic compounds are therefore chosen for antiseptics in such cases. The most effective of these are substituted phenols ; however, it has been found that the constituents of certain indigenous essential oils such as thymol are useful.

Testing the Efficiency of a Treatment

Many methods, both chemical and biological, have been devised for measuring the efficiency of rotproofing treatments.

Chemical methods are preferable for routine examination of supplies of military stores, since they are more rapid, easier to control, and less subject to variation. These methods evaluate the concentration of one or other of the active components of the specific treatments, the protective effect of which can be assayed by a suitable biological method, such as one of those listed below.

Chemical control may be used for fibre rotproofing treatments, but should preferably be supplemented by biological tests. In such cases, the resistance of a treated fabric to microbiological attack is generally assessed by a comparison of the tensile strength of the treated fabric before and after exposure to microbiological attack. An " extended life " figure is then computed as the ratio between the time taken for the tensile strength value of the treated and untreated fabric to fall below a certain arbitrary standard, when subjected to microbiological attack.

An additional check of this deterioration is afforded by a determination of the increase in the cuprammonium fluidity, carried out by the Shirley Institute method. These figures are taken in conjunction with microscopic examination of the fibre, which indicates incipient cuticle damage before the tensile strength or cuprammonium fluidity figures are significant.

The following biological methods, applicable to fibre rotproofing treatments, have been standardised in these laboratories.

(1) *A soil burial test*, in which the fabrics are placed in intimate contact with a soil of known composition, having a well-developed microflora. The tensile strength, weftwise and warpwise, is determined from time to time and the " extended life " of the fabrc estimated. This method, although empirical, is rapid and has given consistent results.

(2) *Thom's Test*, in which the reduction in tensile strength of the fabric is determined after exposure for 14 days to the specific cellulose-attacking organism, *Chætomium globosum.*

In the case of proofed fabrics such as waterproofed canvases, the amount of antiseptic is based on the quantity of dressing and not on the quantity of fabric. Thus, there is only a small proportion, of antiseptic on the treated fabric, and, moreover, the nature of the antiseptic is frequently more complex than in the case of a fibre treatment, where copper or another metal may usually be determined. For example, where such an antiseptic as salicylanilide is present in a waterproofing composition, its chemical assay is a matter of considerable difficulty, since the method must necessarily be a micro one, and the other components of the proofing mixture usually interfere with the detection and estimation of the antiseptic.

(3) *Method for testing the susceptibility of a treated fabric, such as a waterproofed canvas, to micro-biological attack.*—This test is qualitative, and constitutes a useful simple routine method for inspecting and controlling the quality of the large quantities of this type of fabric utilized in the present emergency.

Discs of the treated fabric are placed in intimate contact with a petri-dish culture of *Aspergillus fumigatus*, and then incubated in a humid chamber. The discs are examined for the incidence of hyphal growth during the incubation period of 7 days.

Osmanshahi Mills Ltd., Nanded

Third Annual School Day Celebrations

THE third Annual School Day of the Osmanshahi Mills, Ltd., Nanded, was held on 22nd June 1945 with a salutation by the school boys at 4-30 p.m., after which sports events were conducted.

The school boys proved themselves to be very efficient in the drill and the club exercises to the accompaniment of music. There was great enthusiasm among the school boys and many parents were present.

The games were over by about 7 p.m., after which the Welfare Secretary, Mr. M. M. Shaikh, presented his report and requested the manager to distribute the prizes to the winners in sports and the first three successful students in each class. The prizes consisted of useful things for the children such as bags, slates, belts, pencils, knives, books, trays, tumblers, holders, buttons, mirrors, spoons, etc.

The following are extracts from the report:

"This school was started long ago in 1929 with about 10 boys. Now, according to the syllabus of Government primary schools, education in Urdu, Marathi, Telugu and Modi languages is being taught up to the 5th standard. Arabic is also taught to boys and girls.

"Last year we supplied 200 pairs of clothes to our boys and girls and this year we also gave 215 pairs of uniforms.

"The present strength of the school is 215, out of which 188 are boys and 27 girls. There are four teachers, two for the Urdu section and two for the Telugu section. Uptil now after completing the 5th standard, six students have joined the Government school. The school has supplied many boys as good workers to the mills in various departments.

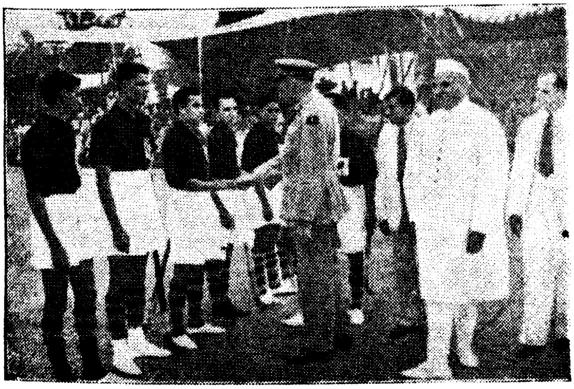
"The improvements completed in this year are:— The installation of electric lights in the school; the provision of black-boards; the addition of wooden clubs and hockey sticks, and the addition of two more rooms.

"This year the boys were medically examined by our Health Officer. A scheme for a full building for the school and a good playing ground had been drawn up. These things will come under our new housing scheme."

Mr. M. A. Ghafoor, who presided on the occasion, then addressed the gathering, impressing upon them the importance of education. He said:

"Fifteen years ago the school was started with only 10 boys, but it is very gratifying to note that to-day there are 215 students on the roll. Further increase is also expected. The success of this school is mainly due to our esteemed Managing Agent, Mr. Tyabjee, who is the real moving spirit behind this enterprise, and due to his interest and sympathy the school has made progress by leaps and bounds.

"The present school building is quite inadequate, looking to the number of boys, but we hope to have a decent and up-to-date school building under the new scheme, where educational and physical facilities will be provided on modern lines."



Delhi Cloth Mills All-India Hockey Tournament

H. E. The Commander-in-Chief, Gen. Sir Claude Auchinleck, being introduced to the players in the finals of the Delhi Cloth Mills Hockey Tournament in which 40 teams from all over India had participated.

Improved Types of Cotton in the United Provinces

BY B. L. SETHI AND M. A. A. ANSARI

Department of Agriculture, United Provinces, In "Indian Farming"

THE United Provinces grow inferior types of cotton known to the trade as 'Bengals' (*G. arboreum* var. *neglectum forma bengalensis*), consisting of broad and narrow-leaved plants with either white or yellow flowers.

As a result of plant-breeding operations on cotton since 1905 by different workers, the Department has evolved a number of improved types which passed into general cultivation in varying extent from time to time. Among the most important are C402, A19, JN1, CA9 (American cotton) C520 and Perso-American. Of these the last two have proved to be particularly hardy, high-yielding and superior in quality all over the cotton-growing areas in the United Provinces. These two cottons are now being multiplied by the departmental farms for large-scale growing by the cultivators.

Characteristics of Improved Types

C520 is a single-line selection from the indigenous material brought down from a survey of Saharanpur and Rohilkhand tracts during 1919-20. It is an early hardy variety with white flowers and narrow leaves. The average yield of *kapas* per acre varies from 6 mds. 19 srs. to 9 mds. 30 srs. under unirrigated and irrigated conditions respectively and is a maund more in both the cases than the yield of the local *desis*. With a ginning percentage of 35.5 and a staple length of 0.76 in. it is capable of spinning up to 13 warp counts. It fetches a premium of As. 8 to Re. 1 per md. of *kapas* and a profit of Rs. 11 to Rs. 20 per acre over the local *desis*.

The best period for sowing the variety under irrigated conditions and in districts of deficient rainfall is from the last week of May to the first week of June. Under heavier rainfall conditions the crop should be sown in the first fortnight of June so as to escape the adverse effects of heavy rains in August and September experienced in the United Provinces. In rain-fed areas, however, it has to be sown at the break of the monsoon. The crop is ready for picking in about four months' time.

Perso-American is a single-line selection from the exotic material (*G. hirsutum*) imported from Persia (Iran) and acclimatized in the United Provinces. It is a high-yielding and early variety. The plants have broad, three-lobed leaves and large, widely expanding pale-yellow flowers. The seeds are large and fuzzy and the seed-coat varies from brown to black in colour. The average yield of *kapas* per acre is about 10 mds. 9 srs., i.e. about a maund and a half more than the local *desi*. With a ginning percentage of 32 and a staple length of 0.88 in., it is capable of spinning up to 32 maximum warp counts. The variety fetches a premium of Rs. 2 to Rs. 3 per md. of *kapas* and a profit of Rs. 20 per acre over the *desi*. During the current season, i.e., 1941-42, the cash acre value of *kapas* comes to Rs. 41 more than the local *desi*. This is due to the high premium obtainable on account of the demand for long-stapled cottons due to the war. Perso-American can be cultivated under irrigation only and is best sown in the first fortnight of May. The crop is ready for picking in a little over four months.

In order to test the performance of C520 and Perso-American cottons in yield and quality as against *desi*, experiments were carried out at six different localities during four years, i.e., from 1937 to 1940 in the western United Provinces. In all 23 replicated randomized experiments were laid out. The results obtained are given in Table I.

TABLE I

Method of layout ..	Six randomized blocks.
Years of trial	1937-38 to 1940-41.
Localities in which field tests were conducted..	Government farms at Raya (Muttra), Kalai (Aligarh), Bichpuri (Agra), Bulandshahr, Meerut and Mainpuri.

Name of type.	Average acre yield (*kapas*) in mds.	Average staple length in inches.	Average ginning percentage.	Maximum warp counts.	Average value of *kapas* per md.			Average cash value of *kapas* per acre.		
					Rs.	a.	p.	Rs.	a.	p.
Local *desi* ..	10.22	0.70	30.8	10	7	6	0	75	5	10
Mixture C520.	11.24	0.76	35.5	13	7	14	0	88	8	2
Perso-American ..	10.00	0.88	32.2	32	9	6	0	93	12	0

Figures for columns 3 and 5 are obtained from tests carried out at the Technological Laboratory, Matunga.

It will appear from the results given in Table I that the superiority of both C520 and Perso-American cottons over the local *desi* is now an established fact. Higher yield for local *desi* and its spinning value up to 10 maximum warp counts may be attributed to the fact that the present-day *desi* of the tract is mostly a mixture of C520 by gradual infiltration of the variety consequent on the efforts of the Agricultural Department in the C520 seed distribution work. The comparatively lower yield for Perso-American cotton is attributed to the fact that the experiments were sown at the optimum time for the *desi* variety and not for Perso-American. The results of seven years of cultivation of Perso-American and C520 for commercial purposes at Raya, where both of these varieties were sown under their respective optimum conditions, show that Perso-American out-yielded even C520 by about 56 lbs. of *kapas* per acre.

The improved types of cotton are getting increasingly popular with the cultivators. During the past eight years, the area under C520, including the natural spread, has extended from

17,419 to 33,231 acres, the main concentration being in the western United Provinces and in Bundelkhand, where on an average 55 per cent. and 39 per cent. respectively of the total acreage of C520 is found. The remaining 6 per cent. is in the Sarda Canal area.

The area under Perso-American has increased from almost *nil* to 12,000 acres in the past four years. Since it can be grown only where irrigation is available, about 70 per cent. of it will be found in the western United Provinces, 25 per cent. in Rohilkhand districts and the rest mostly in the Sarda canal area.

Owing to the policy of the Government of India for reducing area under short-stapled cottons, C520 cotton is being replaced by Perso-American wherever irrigation is available.

The Economic Botanist (Cotton, Paddy and *Rabi* Cereals) maintains the nucleus of pure seed of improved varieties of cotton. This is sent to the Deputy Directors of Agriculture who multiply it on their circle farms. The seed thus obtained is distributed to selected growers, whose crop is rogued and the produce purchased for further distribution by the Department.

Organized marketing of Perso-American cotton was taken up for 1941-42 in the western United Provinces. A co-operative society was formed for the disposal of this cotton with the help of the Departments of Agriculture and Co-operative Societies and a cotton purchase centre was started at Hapur. The average rate of *desi* in the western United Provinces was Rs. 5-8 per md. of *kapas* over which Perso-American cotton obtained a Premium of 50 to 100 per cent.

Besides the above organization at Hapur, Pokhrayan (Cawnpore District) and Ujhani (Budaun District) provide ready buyers of the improved varieties in Mr. J. N. Cocolas of Cawnpore and the Prem Spinning Mills of Budaun, respectively. The former owns a ginning factory at Pokhrayan. He distributes the seeds of C520 and Perso-American cottons to the cultivators who sell back the *kapas* to him at a premium. In 1940-41, Mr. Cocolas gave a premium of Re. 1-8 for Perso-American and As. 8 for C520 over the *desi*, which was increased from Rs. 2 to Rs. 3 for the former and Re. 1 for the latter in 1941-42.

As for Ujhani, the Prem Spinning Mills have even started subsidizing the cultivation of Perso-American cotton. In 1940-41, they gave Rs. 1,000 and Rs. 1,500 towards the wages of kamdars for organizing sowings and collection. By this system they were able to purchase at the factory gate the produce of about 574 acres at a premium of Re. 1-12 per md. in 1940-41 and of 3,170 acres during 1941-42.

A scheme for the distribution, extension and marketing of Perso-American, financed partly by the Indian Central Cotton Committee and partly by the provincial Government, has been sanctioned for a period of four years commencing from May 1942 and will operate in the districts of Bulandshahr, Aligarh, and parts of Muttra, Meerut and Etah Districts. It is intended to replace at the end of four years an area of about 60,000 acres of local *desi*. A grant of Rs. 59,331 has been made by the Indian Central Cotton Committee towards the cost and a sum of Rs. 66,522 will be the provincial Government's contribution during the four years.

War Risks Insurance Ordinance: Premium Reduced

IN view of the improvement in the war situation, the Central Government have had under consideration the question of either giving free cover or reducing the premium payable under the War Risks (Goods) Insurance Ordinance, says a *communique*.

The Central Government have now decided that all policies expiring on 30th June 1945, issued under the War Risks (Goods) Insurance Scheme shall, without the payment of any further premium, be deemed to be effective for the quarter ending on 30th September 1945. For the quarter ending 30th September 1945, premium shall, however, be payable on new policies which are either taken out for the first time or are taken out for an amount in excess of the amount for which free cover is provided as above. At the rate of one pice per month for each complete sum of Rs. 100 in respect of goods liable to compulsory insurance, and at double that rate in respect of goods that are voluntarily insurable.

As regards the War Risks (Factories) Insurance scheme, the Central Government have decided to waive payment of the instalment of premium due on 1st September 1945, under all of insurance issued under this scheme for factories and inland vessels in respect of which all instalments of premium up to, and inclusive of, the quarter ending 31st August 1945, have been paid by the due date. Premium shall, however, be payable on all new policies and supplementary policies taken out in respect of properties becoming insurable on or after 1st September 1945, but before 1st December 1945 at the rate of ¼ per cent. of the insurable value.

The Bichromate Industry in India

BY F. R. MOOS, B.A., D.COM. I.M.C., A.C.I.S. (London).

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THE bichromate industry in India is a war baby —a natural seed and growth of World War II. It is a lucky war-baby in that its progress has been very quick, and those responsible for starting the industry, viz., the Government of India, could not but hearken to its loud cries and continue to feed it regularly, adequately and well enough so as to ensure its natural healthy growth.

The bichromate war-baby owes its parentage to no less a person than the one-time Commerce Member, the Hon'ble Sir Zafrulla Khan. The Supply Member, Sir Ramaswamy Mudaliar, was responsible for nursing it well during its teething troubles, and one cannot sufficiently praise the Chemicals Directorate, particularly Mr. P. R. Crera, Dr. L. A. Bhatt, Dr. Patel, Dr. R. Venkateshwaran and other co-directors, for taking pains to see the industry develop to almost its full stature on sound lines. The industry owes much to them indeed for their broad outlook and their sympathetic assistance and guidance, without which the pioneers would have had to suffer much and to grope in the dark.

Prior to the war, bichromate was a foreign monopoly. The English and the Americans held the field and, if an Indian was at all interested in it, he could only import. It was a sad state of affairs when chrome ore used to be exported from India and almost all the other process chemicals were actually available in the country. With the scarcity of shipping, the Government of India could not but encourage this industry. It was so vital to the manufacture of khaki-dyed cloth, for leather tanning, for pigments and for explosives.

Several factories grew up in order to meet the demand. Binny's in Madras, the Cawnpore Chemicals, the Delhi Cloth Mills and several parties in Bombay, e.g., the Pioneer Magnesia Works, Ltd., the Pioneer Chromate Works, Ltd., the Premier Chromates, the Golden Chemicals and others, are a few worth mentioning. Dr. Hiramaneck was the first to do a little propaganda in the Press by inviting well-known persons to see his bichromate furnaces, etc.

But it was Dr. Damle, Industrial Chemist to the Department of Industries, Government of Bombay, who went out of his way to help the growth of the bichromate industry, particularly the manufacturers in the Bombay Province, in those very early days when correct furnace building and furnace technology were little known to the Indian industrialist. Dr. Damle attended to almost all the teething troubles as a family doctor would and set the mother's mind at peace. For almost two years the writer had watched him give his time and energy to the bichromate industry with indefatigable zest and zeal, advising this factory, guiding that, and solving many knotty problems and eliminating bottlenecks of the early pioneers. The Bombay manufacturers owe a great deal to him and acknowledge their debt to him for his patriotism and sacrifice. The industry in Bombay later sought the guidance of Dr. G. P. Kane of the Department of Chemical Technology to great advantage.

The manufacturing process, though apparently simple, needs continuous attention by well qualified chemists and some expert technical guidance at certain points to ensure the optimum output at an economic cost.

Raw Materials

The raw materials are easily available. They are :— (1) Chrome ore from Baluchistan, Mysore, Bihar and Orissa. Baluchistan ore is perhaps the best in the world, and, on an average, analyses as under :—

Cr_20_3	..56.5 per cent.
$Fe0$	..12.5 „
$Mg0$	..14.7 „
Al_20_3	..11.2 „
$Si0_2$	.. 1.1 „

(2) Lime could be had either at Katni or Rajur or any other source. It is said that the better the $Ca0$ content of lime the greater the conversion, though the writer feels that good quality limestone could well be used, as the ultimate idea is to prevent chrome ore and soda ash from fusing into lumps by the use of lime. An average Katni lime shows :—

$Ca0$	..92.0 per cent.
$Mg0$	.. 1.6 „
$Si0_2$	.. 3.8 „
Fe_20_3	.. 0.6 „
Loss on ignition	.. 3.0

Available Lime 87 per cent.

(3) Soda ash—heavy or Magadhy wili do. This is now locally prepared by Tatas and H. M. Mehta & Co., to some extent, though I.C.I. Ltd. hold the field.

(4) Sulphuric acid (H_2S0_4) commercial, which could be had all over the country where there are acid plants.

(5) Potassium chloride—could be had from the Pioneer Magnesia Works Ltd., of Bombay and Kharaghoda.

Process

The chromite or chromium oxide is heated to 1050° to 1100° Centrigrade in a reverberatory furnace with sodium carbonate along with lime or limestone, which prevents fusing. Due to the absorption of extra oxygen it is changed to sodium chromate which is now water-soluble.

The Na_2Cr0_4 is thereafter treated with suphuric acid and the sodium chromate is converted to $Na_2Cr_20_7$ or sodium bichromate.

$$2Na_2Cr0_4+H_2S0_4=2\ Na_2Cr_20_7+H_20 + Na_2S0_4$$

Before acidification the hot ore is taken into huge cylindrical tanks, with layers of gravel and rubble at the bottom and lixivated with water, or washed on the counter-current principle. Alternatively, the autoclave process is adopted and is very efficient for the purpose.

The furnace is the most important part of a bichromate plant. Its construction is often a difficult affair if not an ordeal, and many a furnace has landed the manufacturer in grief if anything is scamped, particularly time. A hastily built furnace will only hasten its fall. The hearth usually depends on the size and type of the furnace. The fuel could be either furnace oil, or coal by the producer-gas principle. A recuperative system is always provided and the heated air, which is circulated by a small blower, enters the combustion chamber and assists the combustion of the atomised oil.

After acidification the sodium bichromate liquor is concentrated in oil-fired or coal-fired boiling pans upto 67° Be[1]. Impurities are then allowed to settle in a settling tank and, if necessary, further boiling and/or crystallization with settling of impurities may be tried. Passing through a filter press may help before crystallization.

The crystals may then be centrifuged and packed in iron drums.

Every batch that is drawn from the furnace needs careful analysis as to the conversion ratio. Any untreated ore above 1 per cent. to 2 per cent. is wasteful and uneconomic and the quality and proportion of the raw materials and temperature should be investigated. Occasionally the mixture of ore, etc., on the hearth-bed needs constant raking with long iron rakes, say, every 15 minutes.

A charge takes 4½ hours or so and, if the roasting has been good, it comes out as a bright red loose burning mass which darkens to something like granular coffee powder.

Potassium Bichromate

The acidified sodium bichromate liquor or the mother liquor is concentrated to a certain density and then potassium chloride is added—keeping the potash salts slightly in excess with constant stirring, preferably mechanical. After further concentration, settling and final crystallization, the potassium bichromate is centrifuged. The purity percentage often demanded is as high as 98 per cent.

Effects of Chromates on Industrial Workers

Dichromates of soda and potash should preferably be handled with great care. It is reported to have given dermatitis and hence long rubber gloves are considered desirable. It is advisable to have all reaction vessels, boiling pans, etc., fitted with mechanical stirrers and completely covered to avert disaster due to splashing for one reason or other. Continuous breathing of bichromate fumes are apt to lead to necrosis and/or injury to the lungs.

Uses

A few of the uses of bichromates are:—(*a*) Leather tanning, (*b*) in pigments, *e.g.*, Lemon Yellow, Chrome Yellow, etc., (*c*) Calico-printing (*d*) Turkey Red dye, khaki dying, and for chromic acid manufacture.

The local manufacture now amounts to a total of 2,800 to 3,000 tons and meets the entire demand of the country.

The average imports of potassium bichromates in India between 1933 and 1939 are known to be about 5,870 cwts. approximately yearly and valued at Rs. 1,52,960. The U.K., U.S.A., Japan and Germany were exporters to India.

Sodium dichromate was imported to the tune of 18,500 cwts. annually and was valued approximately at Rs. 4,22,365.

During the same period India exported annually about 26,000 to 28,000 tons of chrome ore to the U.K. and other Western and Eastern countries.

During 1942-43 and 1943-44 about 2,500 tons or more of bichromates were imported in India owing to the oversight of the import control authorities without consultation with the Chemicals Directorate, leading to a furore among the local manufacturers. The Bombay Bichromates Association, under the chairmanship of Mr. B. S. Lalkaka, a pioneer in the field of chemical manufacture since 1915 and a veteran fighter for Indian industries and industrialization of the country and Mr. Purshotamdas Popatlal called a conference of all-India manufacturers of the product and formed an all-India body to organize concerted measures against unfair competition and to put the united demands of the industry before the Government.

At present the industry enjoys a sort of subsidy and its average costs are nearly Rs. 68 to Rs. 75 per cwt. of sodium bichromate, though it is anticipated that in the post-war period these could be brought down to Rs. 35 to Rs. 38 per cwt. and the industry would hold its own against all odds. The Government is, however, pledged to protect the industry and should not fail in its duty. It is hoped by every industry started during the war and such others as may be started hereafter that the Government of India will decide once for all to be the real protector of Indian industries. With men like Sir Ardeshir R. Dalal on the Planning side, the blunders of the World War I should not be repeated by Government, which has now learnt to view the development of industries as an absolute necessity for the progress of the country and not as an ugly evil to be shirked and kept aside if possible.

Cotton Mills Underground !

"The millowners of the future will have to devote considerable attention to factory construction. Mills of modern type are already provided with spacious, well-lighted and well-ventilated buildings which have added greatly to the comfort of the operatives. Owing to the progress of science air-conditioned factories are no longer a mere paper proposition. It may, however, be worthwhile considering the question of underground erection of factory buildings, wherever soil conditions permit, in order to escape the ravages of aerial attacks, which are a prominent feature of modern wars." (MR. S. H. BATLIVALA in the GOLDEN JUBILEE SOUVENIR of the *Indian Textile Journal.*)

The Mettler Full-width Dyeing Machine

THE apparatus hitherto required for boiling, bleaching, washing and dyeing pure silk articles took up much space and also caused high labour costs, so that an endeavour has constantly been made to produce a machine capable of treating such articles in a uniformly simple manner, just as cotton articles are treated in jiggers. The need for such a machine became more acute with the introduction of articles made of viscose and acetate artificial silk, staple fibres, and mixed weaves of all kinds.

After many years of research, Mr. H. W. Mettler succeeded some time ago in developing a working principle for a full-width dyeing machine to ensure tension-free motion of the fabric through the bath. Since Sulzer Brothers* have acquired the licence rights for this machine, the present type has been evolved and introduced successfully into practice in Switzerland and other countries.

It is almost invariably the case that insufficient attention is given to the consideration of tensionless movement of the fabric through the bath. When the fabric passes through the bath, it practically always swells and shrinks, to a greater or less extent, both in length and in breadth. If this tendency is allowed free play, it is necessary for the peripheral speed of the fabric at the winding-off batch to be greater than the simultaneous peripheral speed at the winding-on batch, the speed difference being proportionate to the shrinkage. If this requirement is fulfilled, it would be possible, for instance, to boil, bleach, wash and dye an article with 30 per cent. shrinkage in such a way that, after working a charge initially 1,000 yds. in length, 700 yds. would be taken off finished from the machine.

In order to be able to meet this requirement, an hydraulic drive acting independently for each of the winding rollers has been developed and protected by patents. The absence of tension given by this hydraulic drive, however, could not be fully utilized, i.e., blemishes of all sorts could not be eliminated, until a new type of stretching and guide rollers had been developed in the course of extensive investigations undertaken in collaboration with the inventor; these rollers have also been patented in many countries. It was necessary above all to reduce to a minimum the friction caused by these parts. Furthermore, the task which the spreading rollers have to fulfil is now of quite a different nature,

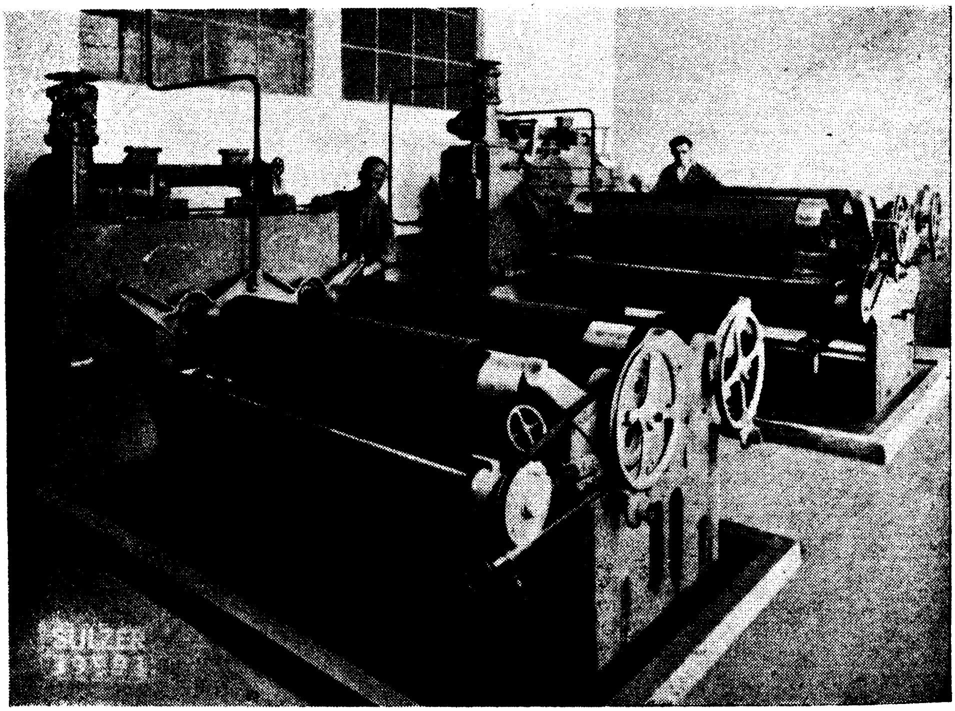


Fig. 1.—Two Sulzer full-width Dyeing Machines, Mettler system; in the foreground a machine of the two-roller type, in the background one of the three-roller type. To the left of each machine is a water container with hydraulic drive and self-contained water circulation.

*** The Indian Representatives of Sulzer Bros. of Switzerland are Messrs. Volkart Brothers, Graham Road, Ballard Estate, Bombay.**

since the tensionless fabric passing through the bath is no longer drawn closely over these rollers.

Two types of machine are constructed. In the simpler, smaller machine, the fabric is led through the bath straight from one roller to another, whilst in the larger machine a so-called conveying roller is fitted between the two winding rollers in order to help the fabric to pass through the dye liquor. With the help of two float rollers, the fabric is held lightly pressed against the working roller. Owing to this slight squeezing at each passage, articles can be treated on this machine which formerly were extremely difficult to dye in the piece. In addition, the chief feature of the two machines is the self-contained hydraulic drive which consists in essentials of a water container, circulating pump, distributing piping and regulating members, the special water-wheels being keyed on the shafts of the winding rollers: there are also two side shields with the vat between them and the rollers for winding, guiding and spreading. The hydraulic drive is designed in such a way that the speed of the fabric through the bath may be regarded as practically constant even on the two-roller machine; with heavier articles there will be a slight fall in speed, but this does not have any adverse effect on the dyeing process. In the big machine, on the other hand, the speed is absolutely constant. Since the vat in the latter type is fairly broad, the machine is fitted with an hydraulic raising device, so that the vat can be raised and lowered even when full, thus making attendance on the machine much easier. In the two-roller type, the liquor content of the vat is kept as small as possible. It must be remembered, however, that the fabric carries away a considerable quantity of liquor because of the tensionless movement through the bath, and that the batch is consequently saturated with dye liquor. The result is a considerable after-dyeing effect in the batch itself, which greatly accelerates the dyeing process. The guiding and spreading rollers are suspended on lateral supports and can be adjusted in their relative positions, so that any special requirements demanded for a new type of article can be complied with. The vat itself is absolutely smooth internally, and can thus be easily and quickly cleaned.

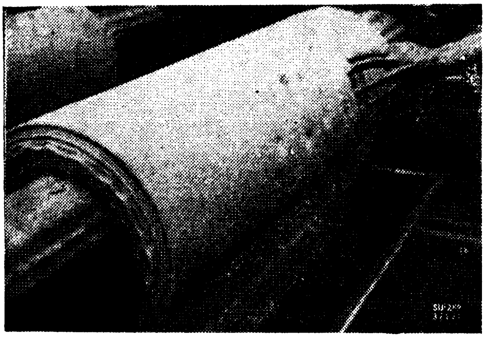


Fig. 2.—Detail of the Sulzer full-width Dyeing Machine, Mettler system. In consequence of the absence of tension the fabric is wound loosely on the roller and is completely saturated with dye liquor.

With the tensionless motion, irregularities in the weave may cause lateral movements of the fabric through very slight temperature differences in the bath; the winding rollers are therefore arranged to be movable axially. This permits of an end adjustment which enables the selvedges to be laid uniformly one on the other, or side by side in cases where they are heavy or shrinkage is great.

The tensionless motion of the fabric through the bath not only improves it in quality, but also helps to remove other sources of defects, such as irregularities in the dyeing, spotting, hard touch and greasy shine. The lack of tension and the soft spongy winding on to the batch make it possible to load the machine with big quantities of woven fabric, in the case of very light articles as much as 1,000 yards.

If the trouble is taken to suit the dyeing recipes to the special features of the tensionless motion, a considerable saving in dyestuffs can also be effected.

The suggestion at first made by dyers that the machine should be fitted with an automatic reversing device has been dropped now that better acquaintance has been made with the novel features of the machine. It should be specially pointed out that automatic reversing is not compatible with tensionless movement of the fabric through the bath. On the other hand, the attendance required by the machine is extraordinarily simple and operators soon learn how to use it; the adjustment of the machine to suit any particular article is easily effected by a corresponding setting of the quantity of water supplied to the hydraulic drive.

On the strength of the good results obtained in practice, the sale of this machine has now been extended to countries overseas, so that the many advantages offered by this novel type will be available to a wider circle of dyers and textile firms.

Red Leaf in American Cotton

THE formation of red and yellow pigments on the various organs of the cotton plant is a matter of general observation. Three types of red leaf occur in (*hirsuntum*) cotton. The first is due to nitrogen deficiency in the soil. The remedy against this is the application of sulphate of ammonia. The second type is usually patchy in appearance and is the result of the Jassid (a sucking insect) attack. The remedy against this trouble is to breed varieties resistant to Jassid. The third type is of a genetic character and does no harm to the plant by itself, but is likely to arrest maturity in plants.

The "Pluto" Underwater Pipeline

Another Triumph in the "War of Engineers"

THERE are many of us who even yet hardly realize to the full that the war in Europe is over. Nor do we realize what amazing engineering feats helped towards Victory. The phrase " This is an Engineer's war " is becoming a platitude. The spanner is almost as mighty as the sword. The internal combustion engine is almost as great a factor as the machine-gun, which is itself an engineering product.

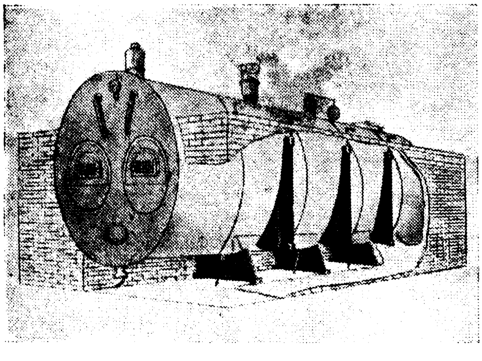
Following on this, it can be said that shortage of petrol played no small part in the downfall of the Nazis, and conversely, a shortage on our part would have delayed victory indefinitely. Such a contingency was avoided by the laying of the " Pluto " pipeline from Liverpool to deep into Germany. It ran without a break, under the waters of the English Channel. The laying of ocean telegraphic cables is now taken for granted among engineering activities, but " Pluto " was a different problem, and one with many more technical difficulties. The petrol, being forced through the pipe, was at high pressure. The jointing of the twenty-one miles of piping under the troubled waters of the English Channel had, therefore, to prevent all leakage and to resist the pressure of tons of sea water, always in motion. The metal piping had to be flexible, to conform with the undulations of the sea bed, and with currents and tidal movements. A vastly different proposition from laying a static line in Iraq or America. It was done, however, the pipe was rendered tight yet flexible by the employment of coupling seals and glands designed and manufactured by **George Angus & Co., Ltd.**, of Newcastle-on-Tyne, England, and made from their well-known GACO synthetic rubber.

The Bombay agents of George Angus & Co., Ltd., are Bombay Mill Stores Supply Co., Ltd., Western India House, Sir Phirozshah Mehta Road, Fort, Bombay.

Flue Gas Deflector Plates

Interesting Device for "Lancashire" Boilers

ONE of the minor defects of the standard " Lancashire " and other cylindrical boilers is that the hot combustion gases are not in effective contact with the boiler plate, so as to give the maximum rate of heat transmission. It will be remembered that the path of the gases is from the ends of the two furnace tubes down through the bottom flue towards the front of the boiler, followed by a diversion into two parts, with passage back again along the two wide flues to the main flue, at which point the dampers are situated.



Flue Gas Deflector Plates for Lancashire Boilers

Accordingly much interest attaches to the special flue gas deflector plates for cylindrical boilers, which are a production of **Power House Components Ltd., King Street, Nottingham, England,** designed to cause intimate contact of the combustion gases with the metal or boiler shell, and, therefore, increase the efficiency. These deflectors are of cast iron, made in sets of three, one set for the left-hand side flue (looking towards the boiler), one for the right-hand side flue, and one for the bottom flue, of the necessary shape to suit the curve of the boiler.

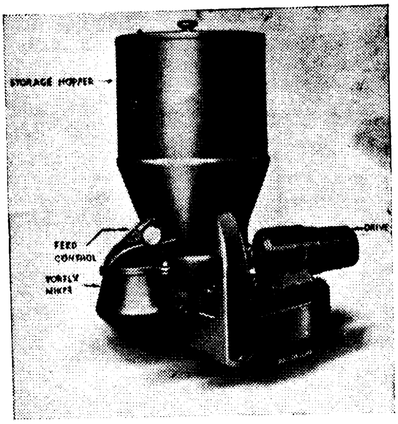
The construction, as stated, is of cast iron plate, bolted together in standard sections, which are carried into the boiler flue and bolted on the site. Each of the side flue deflector plates is carried on a gudgeon foot-plate, which is grouted into position in the boiler flue, on which the plate or damper turns. At the top part of the plates also is fixed a wrought iron rod which projects through the flat brickwork on the top of the flue alongside the boiler and has an external handle attached. This handle can then be turned and the side deflectors adjusted with the added guidance of a small quadrant to any desired position to control to a more or less degree the passage of the combustion gases. The deflector plate for the bottom flue turns on two pivots, one at each side, being raised or lowered and kept in any desired position by means of sprags, that is a loose arm or rod resting on the bottom of the boiler flue, in this case the degree of opening being permanent until changed if necessary when the boiler flues are opened.

Sets of these deflector plates (three units each) are fitted in the boiler flues at three different positions, that is roughly towards each end and in the centre. Consequently the hot gases, instead of having a straight run through the side flues and the bottom flue, are deflected three times in succession and brought into more intimate contact with the boiler plates, resulting in a reduction in the average temperature of the exit gases and, therefore, an increase in thermal efficiency of the boiler plant.

Dry Chemical Feeders

Notable Design for Many Applications

A VALUABLE machine, especially for water softening and general treatment, is the dry chemical feeder, and in this connection the latest principles are well represented by the "Paterson" feeder, a production of the **Paterson Engineering Co., Ltd., Windsor House, Kingsway, London W.C. 2, England.** This is suitable for the continuous feeding at any desired speed, varied almost instantly merely by rotation of a small knob, of a wide range of dry granular material. Although the machine is used to a considerable extent for water treatment, in which, of course, the firm are well-known specialists, supplying material such as hydrated lime, sulphate of alumina, soda ash, sodium aluminate, activated carbon, chalk, sulphate of iron, copper sulphate, and sodium chloride (common salt), it is suitable for almost any granular product such as, for example, dry soap or other detergent



Essentially it consists of a sheet metal cylindrical storage hopper with cover, and a substantial base, with self-contained enclosed electric motor and a vortex mixer delivering the material, after thorough mixing with water, from a pipe at the bottom, and included is a feed control mechanism to vary the amount of the feed from the hopper mixer. The machine is in two sizes, No. 1 and 2, the overall height from the ground level to the top of the hopper being 3′-2″—4′-0″ respectively, whilst in plan view the overall dimensions are 2′-3″—2′-11″ and 2′-3″—3′-0″. Further, the machine can be fitted with an additional large storage hopper for the granular material. feeding into the machine hopper, whilst the minimum and maximum delivery depends, of course, upon the nature of the material.

In this connection also the range of any particular machine is approximately 40: 1, whilst in the two standard sizes the hopper capacities are 2.5—5.0 c. ft. respectively, and the self-contained electric motors are ¼ and ½ h.p., the gross weight of the two sizes being 350 lbs. and 500 lbs. In the case of hydrated lime, for example, which weighs 35 lbs. per c. ft., the size 1 feeder will deliver anything from 0.15—150 lbs. per hour, whilst the No. 2 feeder has a range of 0.5—500 lbs. per hour. With heavier material the range is up to approximately 1,000 lbs. per hour or over, depending on the weight. Thus chalk (64 lbs. per c. ft.) is 0.28—280 lbs. per hour (No. 1 machine) and 0.9—900 lbs. per hour (No. 2 machine). The latter figure also obtains in the case of soda ash, sodium aluminate, and sulphate of iron, whilst for sulphate of alumina the figure in the No. 2 machine is 1—1,000 lbs. per hour, and for copper sulphate 1.2—1,200 lbs. per hour.

Essentially the machine, the latest development being known as the "R" type, has at the bottom of the stationary hopper a slowly revolving feed table driven by the electric motor (or other convenient drive), and projecting into the bottom of the stationary hopper is an adjustable sectional feed knife which deflects a constant flow of the granular material through an aperture down into the vortex mixer, which is below the hopper at one side. The position of the feed knife, adjusted by the control knob, having a pointer moving over a dial, determines the amount of the granular material that is discharged to the vortex mixer, being altered whilst the machine is running. When the material has a tendency to arch or pack the hopper is provided with an internal moving agitator. Means for adjusting the thickness of the knife are provided which, it may be stated, is in a number of sections, which varies the height of the aperture, whilst the motor drive has roller bearings, and the speed reducing gear is enclosed and grease packed. For the vortex mixer the amount of water is about 3-5 gallons per hour, and the whole arrangement is dust-tight, an important point, as well as silent in running.

India's Contribution to Victory in the West

War Supplies to Middle East and Russia

IN the deserts of North Africa were laid the foundations of ultimate victory on the battlefields of Europe. The story of India's contribution to this Desert Victory may be put in a nutshell by saying that long before the full force of American aid gave the promise of victory, she was almost wholly responsible for the supply of bulk stores to the Middle East—from railway wagons to landing craft and electric torches to trouser buttons.

Nets and Tents

The Battle of El Alamein, it is said, was won largely through effective camouflage. Large quantities were despatched from India of camouflage paints, nets, and hemp. Stretched end to end, the nets would loop the world eight times.

These camouflage nets are not all the products of India's high-power factories but are being made by the thousand in the villages and the little known parts of India. They play an important part in the concealment of troop concentrations, particularly of artillery, before an offensive.

Nearly 90 per cent. of the tents which protected the troops from the torrid heat, the canvas and ground sheets which kept the pernicious sand out of the tanks, planes and motor vehicles, went from India. Indian pattern tents gradually replaced other pattern tents in the Middle East, while troops wore clothes made in India and, to a lesser extent, walked in boots supplied from Indian factories. And of the food they ate, a large proportion came from India. Scientific dehydration, one of the first developments in India since the war, enabled India to supply 40,000 tons.

Medical Stores

Among medical stores, equipment and comforts for troops, India supplied over 50,000 stretchers, over 1,000,000 blankets and 250,000 mosquito nets. One thousand five hundred different items of medical stores were supplied from India, and of field dressings, over 1,250,000 of the 2½-inch wide bandages, which is part of the first-aid equipment for every soldier in the field, would, if stretched from end to end, extend well over 2,000 miles.

Over 5,000 tons of vital war materials were sent from India to Russia during the first six months of 1944. Russia has received quantities of gunny bags, tossa canvas, jute ropes, tea, pepper, tin, wolfram and silk, shellac and hides. A special consignment was 1,000 tons of harvest yarn, both of which reached Russia in record time.

Other Middle East Countries

India's contribution to victory in the West is not limited to " bulk stores " for the North African campaign and supplies to Russia. She maintained a regular flow of materials to other Middle East countries.

Supplies to South Africa comprised buttons, hooks and eyes, cotton textiles, sandbags, etc. The railways in Tanganyika were kept supplied with various types of broom brushes and items of uniform for railway employees. Cotton textiles, coloured goods, jute dressed leather and leather manufactures went to Kenya and Uganda.

India's supplies to the United Kingdom —supplies having a direct bearing on victory in Europe—consisted of textiles, cotton jute union canvas, cotton canvas and yarn, mock leno cloth, tossa jute canvas, cotton duck and sandbags.

Trade Unionism in India

" A worker who is unaccustomed to the rigid standards of discipline in a factory believes that membership of a union somehow confers on him immunity against any action by the employer. It is not prudent for a union official to suggest that absence without leave or on false pretexts or some serious omission on the part of the worker might justify disciplinary action by the employer. The result is that few unions in the country can afford to sift complaints and take up only such cases as seem *prima facie* just or genuine." (B. SHIVA RAO, M.A., in the GOLDEN JUBILEE SOUVENIR of the *Indian Textile Journal.*)

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AGENTS

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In the testing room of a famous Lancashire Cotton Mill.

Cotton in the Van of Progress

New Contributions From Research

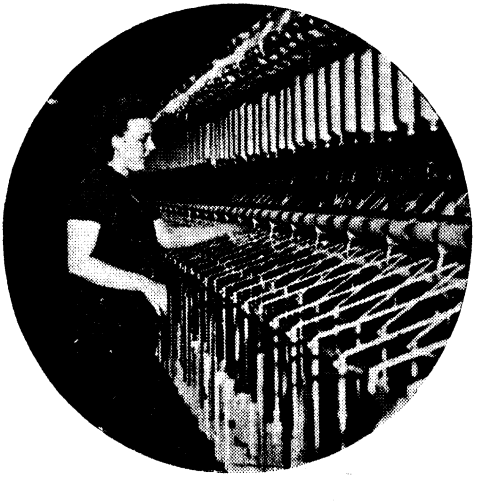
BY JAMES BROATCH, *Secretary of the Cotton Board, England.*

LIKE all other industries in Britain, cotton has had to conform to the changing pattern of the war. About the middle of 1940, the violent change in the war situation affected the industry in two main ways. First, the demand for its products for war purposes increased enormously: secondly, the urgent need for more Service personnel and for the actual weapons of war as well as for the workpeople to produce them led to the closing down of a number of cotton mills and to the transfer of a large proportion of their labour force to the Services and to other munition industries. Production was thus devoted first to the Services, then to the bare needs of the civil population and to supply Empire and Allied countries with such cotton goods as were necessary to sustain their war efforts. Exports in the commercial sense of the term ceased because after all the other pressing demands had been met, there was nothing left over to export.

Britain's cotton industry, in common with other industries, has had to be subjected to a considerable measure of control and the two instruments which have directed the industry during the war are the Cotton Control, a branch of the Ministry of Supply in the main responsible for the production of cotton goods up to the loom state cloth, and the Cotton Board, a statutory body, representative of the industry itself but responsible to the Board of Trade. The Cotton Board has a general mandate to look after the well-being of the industry which has led it to assume a wide and varied range of duties and in particular it is concerned with the distributive side of the industry's activities. Both Cotton Control and Cotton Board work in close collaboration.

The chief lesson which war-time experience has taught is the value of co-ordinated effort between the horizontal sections of the industry. This coordination has emerged from the planning of production by the cotton control, a system introduced to ensure the production of the right types of cloths in the right quantities and at the right time for essential purposes; from the operation of the utility clothing scheme devised by the Government to provide the minimum clothing requirements of the civil population at reasonable prices (a scheme administered by the Cotton Board as far as cotton and rayon cloths are concerned); from the direction of exports; from the schemes administered by the Cotton Board to maintain in good condition those cotton mills closed for reasons already described and from the general unity of effort evoked by a national emergency.

On the production side also the pressure of war-time needs has been a powerful stimulus to rapid technical progress. Cotton happens to be the most vital textile for war purposes, its uses for Service requirements being far more diverse as well as more extensive than those of any other textile fibre. Its contributions to the Services indeed are now so many and varied that it is hard to know where to begin



An interior view in a Manchester Cotton Mill.

A sketchmaker drawing a design on a Zinco plate from which the roller used for printing will be engraved.

an illustrative list. Some of the uses are, of course, well known and represent no new developments—webbing equipment, for instance, surgical dressings, various articles of clothing, working uniforms, overalls and so on. It is natural also to find such products as sandfly netting and camouflage fabrics made of cotton.

But modern warfare makes new demands, and now the uniforms of tank crews and the Army despatch rider's coat are to be found made of stout fireproofed cotton, while the crash helmets of both frequently have a cotton base. Airmen have windproof flying suits made of fine cotton gabardine and flame-resisting waistcoats of fine cotton poplin. Their parachute harness is of cotton and so is their "Mae West" inflated jacket. Dinghies used by R.A.F. bomber and fighter plane crews when they have to bale out over the sea are of rubberised cotton, and barrage balloons are made of cotton suitably proofed. Many of the component parts of aircraft themselves are made from a plastic material consisting of compressed layers of cotton cloth impregnated with synthetic resins.

A large number of these specialised uses have only been developed as a result of strenuous research. The industry is fortunate in possessing the British Cotton Industry Research Association (popularly known as the Shirley Institute) in Manchester where much of the war-time research work has been undertaken by this body and the success it has achieved is certain to have more far-reaching consequences than might at first appear probable, for though its prestige has always stood high, its recent work and the results it has produced are making the whole industry more "research conscious," more ready to experiment and try new methods than ever before. The Cotton Board has made a special effort to keep alive the flame of creative art in the industry by establishing a Colour, Design and Style Centre in Manchester, which by means of displays and exhibitions has encouraged the industry to maintain its interest in the highest standards of design, so that as soon as the war is over there will be no lee-way to make up in this very important respect. After the war visitors from overseas will be welcome at this centre, where they will be able to see displays of British cotton textiles of all kinds.

Shree Bhawani Anand Cotton Mills Ltd., Jhalawar

A COMPANY by the above name has been formed with its registered office at Bhawanimandi, Jhalawar State. Messrs. Jaipuria Brothers (Rajputana) are the Managing Agents of the firm, the Directors being Rai Saheb Seth Puranmull Jaipuria, merchant, banker and millowner, Calcutta; Seth Mungturam Jaipuria, M.L.C., merchant, banker and millowner, Bombay; Rai Bahadur Bhaya Shadilalji Saheb, Dewan of Jhalawar; Mr. Debi Prosad Khaitan, c/o Birla Bros. Ltd., Calcutta; Seth Puranmull Bubna, merchant and millowner, Bombay; Mr. Mahabir Prosad Shah, imerchant millowner, Bhagalpur, and Rai Bahadur Seth Bhikraj Jaipuria, merchant, millowner, and banker, Bombay.

The authorized and issued capital of the company is Rs. 20,00,000, divided into 2 lakh ordinary shares of Rs. 10 each. Out of which 1 lakh shares of the value of Rs. 10,00,000 are reserved for the directors and their friends. The remaining shares are offered to the public.

There is vast scope for the development of the cotton textile industry in Jhalawar State as the State has granted a monopoly to carry on the business and has also agreed to grant a piece of land of 300 bighas or more, free of cost or at a concession rate and at the same time no tax, duty, or cess will be levied by the State on the manufactures of the company as also on import into and export from the State of any material such as cotton, wool, silk and artificial silk, building material, machinery, plant and mill stores, etc., required for the mills. The mill buildings are under construction and are expected to be completed soon. The State will be entitled to a royalty of 4½ per cent. on the net profits of the company after seven years from the date of the running of the mills.

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REVIEWS

Bombay Cotton Annual, 1943-44. No. 25. Published under the authority of the East India Cotton Association, Ltd. Bombay. Price: Rs. 3-0-0.

This annual compilation of the East India Cotton Association, Ltd., Bombay, is now in its 25th edition. It is an authoritative compendium of all matters relative to every branch of the cotton trade, containing statistical tables of crops, exports, imports, prices, stocks, consumption, and Government notifications. Following the report of the Directors is the usual review of the season 1943-44. The statistics of Indian cotton are grouped under the heads of crop forecasts, acreage, production, ginning returns, receipts and exports, consumption, stocks and prices. The statistics of Indian textiles cover production of yarn and piecegoods, spindles and looms of Indian mills, growth of the Indian mill industry and prices of standard counts of yarn and cloth. Other sections include imports of foreign cotton into Bombay, statistics of foreign cotton, Cotton Transport Act and Rules, Cotton (Forward Contracts and Options Prohibition) Order 1943. The volume should, therefore, meet the requirements of all who are interested in the production, distribution and consumption of Indian and Foreign cottons, yarn and cloth.

All About Textiles and Control Orders. By J. N. Varma, M.A., F.R.Econ.S. Published by the Calcutta Yarn Merchants' Association, 89, Cross Street, Calcutta. Price: Rs. 4-8-0.

Any attempt to bring together all the control orders and amendments must be welcome to the members of the cotton textile industry and trade, but in the nature of it, there can be little conclusiveness about it. The utmost that could be done is to be as up to date as possible, and that is what Mr. Varma has attempted in the volume under review. An appendix has been included which should make the volume still more useful. Besides an account of the controls and their working, the book includes good surveys of the Indian cotton crop, the cotton yarn and cloth industries and trade.

Market Reports : How to Read and Write Them. By Dr. A. M. Lorenzo. Lucknow University Commerce Series No. 1. Published by Kitab Mahal, Allahabad. Price: Rs. 2-12.

The volume under review is a real blessing to students of commerce and economists, as well as journalists and commercial men. The study and interpretation of the commercial news appearing in the daily Press has become so complicated that a clear analytical treatment of the subject in book form was urgently called for, and Dr. Lorenzo's book more than amply fulfils this want.

In the early chapters Dr. Lorenzo gives the reader an insight into the nature and organization of modern markets and market reports. The principles which will help the reader to understand market reports are then clearly laid down and a systematic method of explaining these reports is suggested. The subject matter proper is divided into two sections, commodity market reports and capital market reports. Each of these is again divided into three chapters, produce, manufactures and bullion; money, foreign exchange and stocks and shares respectively. Each chapter contains five sections: the first giving a short description of the particular market and the organization of business, the second containing the interpretation of quotations, the third consisting of extracts, graded and explained, for the guidance of the beginner, the fourth comprising progressive exercises with hints for explanation and the fifth giving advanced exercises with guide questions for practice. The last chapter, on the art of writing a market report, aims at training the student to transfer his ideas to paper most accurately and effectively. Arranged in the manner described above, the author may well hope for a high degree of success in his object of systematizing the subject matter, presenting a scientific method of study and interpretation and preparing candidates for examinations and professional reporters for a career in commercial journalism.

NOTICES

Mishandling of Cloth Situation. By K. N. Gutgutia, Honorary Secretary, Marwari Chamber of Commerce, Calcutta.

From all accounts the cloth position in Bengal has deteriorated owing to administrative mishandling. The quota of cloth allotted to Bengal is alleged to be inadequate. Besides due to the influx of population in this war zone and purchase of cloth by different non-civilian personnel and organizations, a cloth famine has been prevailing in Bengal. His Excellency the Governor of Bengal referred to it the other day.

The trade is reported to have offered assistance to the Government in the matter of distribution under the strictest supervision but the authorities are alleged to have decided, to all appearances, to pursue their own policy. In this connection, the Committee of the Marwari Chamber of Commerce have made a number of representations to the different authorities and some of these communications have been included in the above booklet with a view to apprizing the public as well as the trade of the situation that has been created in the cloth trade in Bengal.

Bengal Millowners' Association Report for 1944 (Abridged). The latest report to hand of the Bengal Millowners' Association contains, as usual, the proceedings of the annual general meeting of 1945 and the report of the Committee for the year 1944 as well as the presidential address at the first quarterly meeting of the Association. According to the report there are at present 36 cotton mills working in Bengal, and when in the fullness of time Mr. N. R. Sarker's plans are carried out, there will be an addition of 20 to this number.

Delhi Cloth and General Mills Co., Ltd.: Annual Report of the Employees' Benefit Fund Trust for 1943-44. Price: Re. 0-5-0.

The Employees' Benefit Trust of the Delhi Cloth Mills is administered by a board of trustees of seven, four of whom are elected by the workers and three nominated by the management and is financed by grants from the company varying in amount according to the dividends declared; in 1943-44 the Trust received Rs. 3,54,325-13-9.

The present activities of the Trust cover financial benefits, education, health, recreation and entertainment and general amenities. The financial benefits include gratuities and pensions, sickness insurance, provident fund, employees' bank, special and emergency assistance. The cash benefit payable to the worker under the sickness insurance scheme has been raised to Rs. 16 per month, without any change in the qualifying or waiting period or the duration for which this benefit is payable. This scale represents a practical advance in social welfare, the worker's contribution being as low as 0.4 per cent. of the average basic wage of the subscribers as against the accepted formula of 3 to 5 per cent.

Textile Association (India): Sixth Annual Report (for the year ended 31st March 1945).

A great increase in membership, the organization of the Second All-India Textile Conference, the opening of branches at Sholapur, Khandesh and Indore and recommendations for the award of the A.T.A. Diploma form important features in the working of the Textile Association (India) in the year ended 31st March 1945. The increase in membership is shared by practically all the textile centres in India.

Stocks of Indian Raw Cotton Held in India by the Mills and the Trade on 31st August 1944. I.C.C.C. Statistical Leaflet No. 2. Price: 4 annas.

From 1933, in pursuance of the decision of the Indian Central Cotton Committee, statistics of stocks of Indian cotton held by the trade at important cotton centres and by mills have been collected and published, annually by the I.C.C.C. office. The figures of mill stocks are collected by direct inquiries from mills on a voluntary basis, whilst those relating to trade stocks are collected through the agency of trade bodies, market committees or provincial authorities concerned. The results of the census of stocks made in 1944 are given in the above leaflet. It also attempts to indicate the distribution, according to staple length ("long and medium staple" and "short staple"), of Indian cotton held in India by the mills and the trade separately at the end of the season 1943-44 compared with the previous four seasons. Of the stocks of 1,878,000 and 2,833,000 bales held by the mills and the trade on the 31st August, 1944, the proportion of cotton "⅞″ and above" in staple constituted 69 and 46 per cent. against 62 and 37 per cent. respectively in the previous season.

Bulletin of the Madras Presidency Electric Licensees Association. Vol. 4, No. 4, April-June 1945.

The above issue completes the fourth volume, but it is unfortunate that it should have been decided to discontinue the publication for the present on the ground that the original expectations of stimulating interest in the profession were not realized to the full. Paper shortage and other practical difficulties have also had their share in closing down a venture which was not without its practical use in its day.

Fibre and Fabric.—We have received a copy of Vol. 98 of *Fibre and Fabric*, a weekly published by the Wade Publishing Co., 465, Main Street, Kendall Square, Cambridge, Massachusetts, U.S.A. and edited by Mr. Joseph N. Paradis. Its annual subscription is two dollars.

More or less alike in name is **Fibres, Fabrics and Cordage** (successor to *Irish Textile Journal* and *Fibres and Fabrics Journal*), published by H. R. Carter & Son, 110-111, Scottish Provident Building, Belfast, Northern Ireland. Price: 1/6.

The *Fibres and Fabrics Journal* has been appearing under the new title, necessitated by the fact that many members of the rope and twine industry have since joined their ranks. The *Journal* contains as usual informative technical articles on all matters pertaining to the manufacture of linen, jute and cordage.

Fairfax Monthly, published by P. Ripley at Fairfax, Chislehurst, Kent, England (Annual Subscription: 20 shillings), is another useful addition to the current periodical literature on fibres, fabrics and cordage. This monthly was formerly known as the *Fibres and Fabrics Monthly*.

We have received from the Indian Central Cotton Committee Technological Laboratory copies of spinning test reports on samples of *Nanded Bani*, *Gaorani*, *Jarila* (Berar) 1943-45; *Jarila* (West Khandesh) *Jarila* (East Khandesh) 1942-45; *Punjab-American* 4F, 1929-45; *L.S.S.* 1938-45 and *Malvi* cottons 1943-45. We have also received technological reports on *V* 434 (Akola) 1944-45; *Gaorani* 6, 1944-45; *Jarila* 1944-45 and *Umri Bani* 1944-45.

J. K. Review, 5, 7. Among other contributions in the above issue, mention may be made of Mr. Agarwala's article on "Assumption Making in an Economic Plan for India" and Lala Lakshmipat Singhania's criticism of the new Income-tax and E.P.T. Amendment Bill.

The Millhand and His Problems*

BY D. ABRAHAM, *Lakhshmi Mills, Sholapur*

THE population of India according to the 1941 census is 388,800,000. Out of these—80 per cent. are engaged in agriculture, 11 per cent. in industry, and 9 per cent. in transport, trade, domestic service and the public services.

Out of those engaged in industry only 4,59,000 are engaged in the cotton mill industry. There are about 400 textile mills in India and 2,500,000 handlooms. The number of men engaged in the handloom industry are about ten million.

Nutrition and Supply of Food

Among the problems of the millhand, the most important is that of nutrition and food supply. Ever since political consciousness began to be roused among India's educated classes about half a century ago the impoverishment and starvation of the masses has been a popular theme.

The average size of a family is found to vary from five members in C.P. and Madras to 6.4 in the Punjab. In other provinces it ranges from 5.2 to 5.8. The average for all India is just under 5.5.

In an inquiry held in 1933 under Major-General Sir John Megaw, it was found that only 39 per cent. of the population of India were well nourished, 41 per cent. poorly nourished and 20 per cent. very badly nourished. The most depressing picture was that of Bengal where the proportions were 22 per cent. well nourished, 47 per cent. poorly nourished and 31 per cent. very badly nourished. In nearly 40 per cent. of the villages the population was considered to be excessive in relation to the food supply. The position was worst in Bihar and Orissa where 60 per cent. of the villages were overpopulated, Bengal and Punjab 46 per cent. The conclusions of the medical survey are of the greatest importance.

(*a*) India has a poorly nourished population.

(*b*) The average span of life is less than half of what it should be.

(*c*) Periods of famine or scarcity of food have been occurring in one village out of every five during ten-year period in which there has been no exceptional failure of rains.

(*d*) In spite of the excessively high death-rate the population is increasing much more rapidly than the output of food and other commodities. Investigations with regard to food from the standpoint of its quality come much earlier, though until about three years ago they were confined to the laboratory. Colonels McCay and McCarrison showed by patient study and observation that the stamina and physique of the rice eating classes of Bengal and Madras could not compare with those of the northern races who live on wheat, milk, vegetables, fruit and meat. Attention is only recently being directed in India to the necessity of a balanced diet. But Colonel McCay says that with a deficient supply of nitrogenous food, mental and physical degeneration is inevitable. The production of milk in India has been so grossly neglected that the quantity of milk available is utterly inadequate and its price is beyond the reach of all but the comparatively well-to-do classes.

Colonel McCay noted that as one passed from the North-West regions to the Punjab, through the Gangetic plains to the plains of Bengal there was a gradual fall in the stature, body-weight, stamina and efficiency of the people. There was also a corresponding fall in the nutrition value of the dietaries of those areas and in the average level of the protein metabolism attained by the people of the Punjab, the United Provinces, Bihar and Bengal.

Sir Robert McCarrison found that the physical efficiency of the Indian workers was greatest among the wheat-eaters, least in rice-eaters and intermediate in those living on one of the millets.

An experiment on groups of albino rats which was conducted some years ago in the Nutrition Institute of Coonoor in South India is of great interest.

Rats were chosen, all of the same age, size and body weights and were segregated into groups in different cages and each group was fed on the common diet of the provinces. On the 80th day of the experiment, they were weighed and the average weights were as follows:—

Sikh	235 grammes
Pathan	230 ,,
Mahratta	220 ,,
Gurkha	200 ,,
Kanarese	185 ,,
Bengali	180 ,,
Madrasi	150 ,,

The subject of nutrition has come to the fore since 1936 mainly because of the active interest of the Viceroy Lord Linlithgow. But the position in India cannot be described better than in the words of the Public Health Commissioner of the Government of India who pointed out in his report for 1935 that a considerable proportion of the population in India revealed malnutritional conditions due for the most part to qualitative defects in the ordinary diet of the people. He added: " No preventive campaign against malaria, T.B., leprosy, maternity relief or child welfare activities are likely to achieve any great success unless those responsible recognize the vital importance of the factor of defective malnutrition and from the very start give it their most serious attention."

Health

Closely connected with the problems of nutrition is the health of the worker.

A conference of medical research workers under Sir John Megaw has pointed out many times since 1924 that the number of deaths in the country every year from preventible diseases alone are 5 to 6 millions. The number of days lost by each worker for the same reason was estimated at two or three weeks in a year and the loss of efficiency from preventible malnutrition and disease at not less than 20 per cent. It was authoritatively stated by the conference that preventible diseases were the greatest cause of poverty and financial stringency.

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* A lecture delivered before the Sholapur Branch of the Textile Association (India).

The principal preventible diseases are malaria, hookworm, leprosy and tuberculosis.

There is not the least doubt that malaria continues to be the greatest menace to the health of India's population. At least 100 million persons suffer yearly from malaria in British India alone. Tuberculosis has rapidly grown into one of the worst scourges of India. There are about 2 million cases of T.B. yearly in India. From a detailed survey made in 1937 in connection with Lady Linlithgow's anti-T.B. campaign the number of cases in India were estimated at approximately 5 millions.

Leprosy is another disease. Sir John Megaw remarks that "leprosy shortens life" and his estimate is ¾ million of lepers in India. Hookworm is worst in Madras Presidency. In Trichinapoly, South Arcot, Salem and Tinnevelly over 90 per cent. of the population are suspected to be affected. Hookworm produces habitual criminals, and village pests of the petty pilfering order are probably innumerable beggars. Some of the prisoners in jails in Madras who were habitual pilferers and village beggars could by being tested for hookworm and by treatment have been made into useful members of the community.

The Problem of Recruitment

One cannot afford to forget the social and economic state of the millhand when he leaves his village in search of employment in the cities. He comes to the city with little knowledge of its conditions and hardly any equipment. He has probably contracted debts and finds it embarrassing to remain in the village or for some other reason he would prefer to be at a place where he is less known and therefore migrates to the city.

There are no State agencies for the engagement of labour. As a rule each factory engages the labour it requires.

When a worker arrives for the first time in the city in search of employment he is generally without any money, skill or influence. He finds out a relative or acquaintance and through him is introduced to any worker in the factory or to the jobber of the factory or mill. Recruitment of new workers is almost entirely left to the *mukadam* or jobber. Even to get inside the mills to be employed as a substitute is not easy; the jobber must be paid for the piece of service done to him and the bribe must be paid to him in cash—a few rupees, the first month's pay, supplemented in many cases by personal service in the house of the jobber or a supply of vegetables, fruits or ghee. In the early stages while the new worker is still learning work, making mistakes some of which may be at the expense of the employer, it is essential that he should maintain harmonious relations with the subordinate staff and the jobber. Even when he is permanent he is dependent on the jobber for leave, promotion or transfer from one kind of work to another. A jobber is usually paid Rs. 40 to Rs. 120 per month and in some mills the head jobber is paid as much as Rs. 300 per month. After a few years' service the jobber has enough money to build *chawls* and start side business as a moneylender. The jobber forms an important link in the chain of officials. He interprets the worker's requirements to the officers and the officers' instructions and directions to the workers. The European managers know him as a "*chalak badmash*."

Housing

The problem of housing is unquestionably one of the most important for the millhand. The majority of the workers live in *chawls*, many of them have tall narrow frontages and extreme depths with the consequence that the middle and the ground floors are without any sunshine and air. Lavatory arrangements in *chawls* are very inadequate and crude and the air is filled with an indescribable stench. There is the common practice of throwing all the filth and rubbish in gutters. It is to such a life that the worker and his family are condemned.

The number of residential buildings in Bombay containing one to ten tenements are about 23,000. The average number of occupants per room in one-room tenements, which form 81 per cent. of the total number, is just over four. 33 per cent. of the population was found at the time of the last census to live in rooms occupied by more than twenty, the actual number in the last category being nearly 16,000. 256,000 persons lived in rooms containing 6 to 9 persons and 80,000 in rooms occupied by 10 to 19 persons.

Many of the streets in Bombay, Calcutta and Madras are used during nights for sleeping purposes, because the average floor space available for each occupant of a single-room tenement cannot be more than what could be covered by a small mat.

In Ahmedabad, which is rapidly developing into a formidable rival to Bombay as a centre of the textile industry, nearly three-fourths of the working class families live in one-room tenements. In Sholapur 33 per cent. live in single-room tenements and 48 per cent. in two rooms.

The condition of housing in Madras, Cawnpore, and Calcutta is nothing better than in Bombay and Ahmedabad.

Wages

With regard to wages in India, generalizations are impossible because of wide variations in the rates and methods of payment in different parts of the country and in various industries.

The rates vary not only between one province and another and one industry and another, but even in concerns of the same type in one industrial centre and sometimes under one management.

In Madras, wages are on the whole higher than in Coimbatore or Madura. In the cotton industry which has spread through several provinces and States wages exhibit extraordinary variations. Weavers are paid in the Central Provinces Rs. 15 to Rs. 18 on one loom and Rs. 30 on two looms. In Cawmpore, further north, weavers get Rs. 35 to Rs. 40 on two looms and where the four-loom system is being attempted, over Rs. 50 a month. At Ahmedabad, where the workers are the highest paid in all India, a weaver on two looms makes Rs. 45 to Rs. 50 a month, if not a little more. In Bombay, wages used to be at one time higher than in Ahmedabad. The weavers are the best paid workers in the industry. In other sections, spinning, for example, wages are much lower, ranging from Rs. 10 or Rs. 14 a month in South India for Rs. 25 to Rs. 30 for the same kind of work in Ahmedabad.

Efficiency

Wages, standard of living and industrial efficiency are intimately related to one another, says Dr. Lokanathan in "Industrial Organization of India." The problem of Wages may be regarded from two points of view—as a means of livelihood for the worker and his dependents and as an item of productive costs.

The Indian industrial worker is in receipt of wages which are insufficient to satisfy even the primary needs of civilized existence. This is hardly surprising as his efficiency, judged by any standard, is low and his desire to improve his standard of living is not intense or at least it does not stimulate him to make great efforts at improving it. Poverty cuts at the root of ambition, initiative, and desire and leads to bad conditions of living; bad conditions lead to inefficiency and inefficiency leads to poverty.

According to the Cotton Yarn Association Ltd., while in the spinning section of a Japanese mill 18 operatives manage to look after 1,000 spindles on an average count of 20s, in India for the same operation and number of spindles 30 to 31 operatives are required. Whereas a competent tenter in Japan attends to two sides and in England to three, in India only one side of the ring frame is attended to by a worker. The number of spindles on each side of the frame is about 200. In some of the mills in Ahmedabad three tenters look after two sides of a ring frame, but this is not usual. In respect of weaving, 48 operatives look after 100 looms in Japan while in India 98 operatives are required for the same number of looms (including all processes leading up to weaving).

According to Mr. Arno Pearse, the average number of looms tended by one operative in Japan is 55 as against 4 in England and 2 in Bombay and Ahmedabad and 1 in other centres in India.

Expenditure

How does a worker spend his earnings? A certain amount is spent on his necessities—food, clothing, and house rent. Then there is the demand of the moneylender which must be met under any circumstances. Drink and drugs are a big item in the budget of the majority of the workers and the consumption of these liquors and drugs is the largest in industrial cities. Amusements take the form of occasional visits to cinema houses and festivals. Comparatively few can afford them. Very little money is laid aside, and in 95 per cent. of the workers almost *nil*, for the education of children.

It is impossible for anyone who has not seen the problem for himself to realize how ruthless is the moneylender in the exploitation of the worker. The moneylender in the town has a small shop close to the industrial area. Often he starts life with no money of his own. He borrows capital from his relative or gathers money by working as a domestic servant or as a servant in a cloth shop. The *marwari* does not need to advertise his presence. His coloured turban is sufficient for the workers to realize that a pawnbroker is near at hand. Inside the shop of the *marwari* is a collection of brass vessels, silver ornaments, earrings, nose-rings, finger rings, old clothes, pots, shoes, umbrellas, etc., while in the corner of the room stands an iron safe containing silver or gold ornaments. Interest is from 15 to 30 per cent. for mortgaged goods. The rates rise for new-comers, for persons without any property to mortgage and generally where the risk of non-payment is great. On an average the *marwari* charges about 25 per cent. interest. Outside the gates of almost every mill in India one can see on pay-day tall, formidable-looking men with *dundas* in their hands. Physical resistance is useless for the ill-fed worker is no match for the Pathan, and failing gentler methods he has resort to the big *dunda*. He charges two annas interest per rupee per month for loans of Rs. 5 to Rs. 10 and 1 anna per rupee for loans of Rs. 50 to Rs. 100.

The *marwari* is often cheated by the worker but the Pathan is always the gainer in his business.

Apart from the *marwari* and the Pathan, the jobber also follows the moneylending business. In a number of instances employers and contractors are known to have lent money to the workers, but this is no longer possible under the Payment of Wages Act.

It would be no exaggeration to say that the overwhelming majority of the workers in India are hopelessly in debt. An inquiry into the economic conditions of about 800 workers in a textile mill in Madras revealed that all but 13 were in debt to the extent on an average of about six months' wages and were paying interest at rates ranging from 18 to 150 per cent. Sickness in the family, unemployment, marriages, funerals and, lastly, a very important item—drink and drugs, were all contributing factors.

Polish Textile Revival

An encouraging account of the revival of textile activity in Poland is given in a *Times* and *Manchester Guardian* message from Moscow. This says that the head of the Central Board of the Lodz textile industries has announced that Lodz factories have equipment to meet the needs of the domestic market in a few months and that the present shortage of raw material is being overcome by the Soviet Union's help. It is estimated that Lodz will shortly be producing over 12,000,000 yards of cotton cloth and 1,000,000 yards of woollen cloth monthly and that the making-up industry, as now organized, has a capacity of 100,000 pieces of clothing and over 1,000,000 pairs of stockings monthly. Clothes are Poland's greatest need, according to the message; there is no serious food shortage.

Social Security for Indian Workers

Discussion Between I.L.O. Expert and Prof. Adarkar

BELOW is the full text of a discussion, broadcast recently from A.I.R. Delhi, between Mr. M. Stack, Chief of the Social Insurance Service of the I.L.O. and Professor Adarkar, author of the Health Insurance Scheme for Industrial Workers in India:—

Roshan Menon:—" Our listeners have several times had the pleasure of hearing your talks on economic subjects, Mr. Adarkar, but this is the first time you have come to the microphone on this big new problem of Social Security. Some of us—but all too few I'm afraid—have read the comprehensive Report on Health Insurance for Industrial Workers, which you drafted for the Government of India. I am taking this opportunity of getting you to give us laymen as plainly as possible, the essence of that report and its implications for the future."

Adarkar:—" Before we go any further, I must introduce to you my friend, Maurice Stack, Chief of the Social Insurance Service of the International Labour Office—the I.L.O.—who has come on a visit at the invitation of the Government of India, all the way from Montreal. He came with an Indian colleague, Raghunath Rao. The Government of India's idea was that these experts might be able, from their international experience, to make suggestions for the improvement of the health insurance scheme outlined in my report. After all, the I.L.O. has been studying social security for the past 20 years and has built up a whole code of international conventions on the subject whereas we in India are just beginners. Actually they have given us some excellent advice, and personally I am very grateful to them."

Stack:—" Adarkar has been extraordinarily decent. We have come here, scurried round the main industrial centres, talked to officials, trade unions and employers, and then drawn up our suggestions for improving the Adarkar Plan. In other words, we have criticized his baby, and he has taken it in good part. But you must not think he is less human than he is. The fact is that he had thought of most of our ideas already, but his original terms of reference were not wide enough for him to be able to put them over in his report."

Roshan Menon:—" Perhaps Mr. Stack, you would tell us in a few words what is meant by " social security." It is a fine phrase and seems to promise a lot, but most of us are not clear as to the what and the how of it."

Stack:—" There is quite a long history—of over half a century—behind the present idea of social security. It is the product of industrialization, and for that reason originated in Western Europe. The creation of a great class of industrial workers with no resources but weekly wages and falling into destitution whenever those wages were interrupted, gave rise to vast social problems, which threatened to ruin the industrial system and the stability of society. Poor relief was not a solution: it was always too little and too late and it was destructive of the worker's self-respect. Another way was found: that of compulsory insurance. One by one the main risks which threaten the livelihood of the worker and his family were covered by insurance schemes: sickness and maternity; industrial accidents and diseases; permanent disablement; death and old age; and, last of all, unemployment. The employer pays the premium for industrial accidents, but the employer, the worker and State share in financing the other schemes. But these schemes having come into existence piecemeal, and without co-ordination, the worker often fell between two stools in his claim for benefit, and there was much complexity, confusion and waste."

Roshan Menon:—"It was at that juncture, was it not, that Sir William Beveridge made his epoch-making proposal for a unified and comprehensive scheme ? "

Stack:—" Exactly. It was his task in Great Britain to make a plan for welding all these schemes into a single rational whole—all-embracing in the risks it covers and extending to the entire population, now accepted by the British Government, was received with enthusiasm throughout the United Nations. This is the principle on which the plan is based."

" That every person willing to work should receive—as a matter of right, and not as charity—benefits sufficient for the decent subsistence of himself and his dependents when he is ill or infirm or unemployed; that he and his family shall be entitled to complete medical care, and shall be helped to find a suitable job by an employment service, and trained for a new job when there is no longer a prospect of employment in his old one."

Roshan Menon:—" Thank you, Mr. Stack, I think we needed that background before getting down to the Indian problem and the Adarkar Report. I will ask Mr. Adarkar now to tell us whether India, with her poverty and backwardness, can afford his social security business, or whether it would not be better, as suggested by the Bombay Planners, to wait till we have 'full employment' and prosperity."

Adarkar:—" I'm glad you have raised this question. Precisely the same question was put to Beveridge at the B.B.C. some time ago and he characteristically replied that the question had a catch in it, like the old school-boy poser: 'Have you left off beating your wife ?' He proceeded to say that it amounted to asking whether we could afford to redistribute wealth in any country, and also that in fact, the poorer we were the more we needed social security. Much, of course, depends upon the extent of our programme, but I personally refuse to believe that social security is so costly a luxury that we cannot think of it unless we have fully accomplished our prosperity programme. There are no such priorities laid down anywhere and it is best that we proceed simultaneously on many fronts. Moreover, it is not as if India is singled out for this, while other countries are going scot-free. Actually very advanced programmes of social security have been accepted practically in all other countries including our competitors, and even in countries more backward than India."

Roshan Menon :—" Now Mr. Adarkar, will you tell us what measure of social security we already have in India ? "

Adarkar :—" Our present social security legislation consists of the Workmen's Compensation Act of 1923, applying throughout British India, and the Maternity Benefit Acts adopted by most of the provinces between 1929 and 1944. The Compensation Act provides cash benefits in case of industrial accident and disease, but no medical care is supplied. The employer is directly liable for the compensation, and is not required to insure his liability. It is believed that many workers fail to enforce their claims, partly from ignorance, and partly from fear of offending the employer, to pay to women factory workers 8 annas a day during absention from work before and after child-birth, and for eight weeks in all. Here again there is no medical care, and the woman, if not dismissed early in pregnancy, often fails to claim benefit for the same reasons as operate in the case of workmen's compensation. This compensation and maternity legislation was not bad as a beginning, but the time has come to bring it up to date and put it on a compulsory insurance basis—make it the collective liability of employers, add medical care and make the cash benefits more adequate to the needs."

Roshan Menon :—" Have you recommended that in your report ? "

Adarkar :—" My report had to be confined to health insurance—cash and medical benefits for sickness—but I slid those recommendations into the appendices. My I.L.O. friends, however, want workmen's compensation and maternity benefit to be included in the health insurance scheme, and I would like that too."

Roshan Menon :—" May we get down now to your health insurance plan?"

Adarkar :—" My original plan provided for compulsory health insurance for wage-earners of factories belonging to the better organized industries—textiles, engineering and minerals and metals. I proposed a cash benefit should be furnished through a special insurance medical service, since the existing medical service of the provincial health authorities are totally inadequate to provide the high standard of medical care that we aim at. However, the Health Survey and Development Committee under Sir Joseph Bhore is, we understand, going to recommend a very great improvement in the provincial medical services. As we do not want an unnecessary duplication of medical services, the present idea is for the health insurance fund to delegate the duty of furnishing medical benefit to the provincial health authorities, paying the authorities a major part of the cost. Naturally the fund would require the most positive guarantees for the quality of the medical care provided. As regards finance, the main part of the cost would be borne by the joint contributions of employers and workers, but the Governments, Central and Provincial, should also help. I have also proposed reserves for contingencies and epidemics respectively, and on top of this, a Government guarantee would be available for meeting any excess liability which might arise. The constitutional position regarding health insurance not being very helpful, I have had to propose the establishment of a Statutory Corporation to administer the scheme, the corporation being based upon adequate representation of the three contributing parties as well as the medical profession. This is a very brief outline of my report."

Roshan Menon :—" Now, Mr. Stack, ~~will you~~ tell us how the Adarkar Plan struck you I.L.O. people ? "

Stack :—" We felt that Adarkar had got his principles absolutely right, but we desired to proceed rather more boldly. We wanted a neat integral scheme, covering accidents and maternity as well as sickness, applying to all workers in all perennial factories, and financed by an inclusive contribution. In this way all those risks which require medical benefit would be brought into a single scheme."

Roshan Menon :—" Are there any special problems—not met with in other countries—confronting the introduction of social insurance in India ? "

Stack :—" Oh, yes. The chief difficulties appear to us to be five in number. First, the high turnover of labour and the worker's practice of keeping one foot in his village, so that it is hard to collect enough contributions per individual to finance an adequate benefit for him. Second, the low level of the wages of unskilled workers which allows very little margin for a contribution. Third, the frequency of illiteracy and the variety of languages, making it essential to have a highly simplified scheme. Fourth, the very dwellings of a large proportion of workers, resulting in poor health and impossibility of treating sick persons in their homes. Fifth, the present inadequacy of medical facilities."

Roshan Menon :—" And do you think these difficulties can be overcome ? "

Stack :—" Yes, with goodwill and energy, all of them. On general grounds employers and the State must help to promote stability of employment, which is necessary to make social security possible, and to which social security in turn will contribute."

Roshan Menon :—" Do you share this hopeful view, Mr. Adarkar ? "

Adarkar :—" Of course, I do. I believe that the scheme we have in mind for health, maternity and accident insurance will be thoroughly practicable on the one condition that the provinces bear their proper share in developing their health services. Moreover, we are not waiting until this scheme is working before we start planning further extensions. There are the seamen and the miners who stand gravely in need of social security. And we shall have to make a beginning on unemployment insurance. It is no secret that all these projects are already under consideration. Sooner or later, we shall also have schemes of social assistance for agricultural workers."

OUR PERSONAL COLUMN

The appointment of **Mr. N. E. S. Raghavachari,** Under-Secretary to Government in the Public Works Department, as Joint Provincial Textile Commissioner, Madras, is officially announced.

Mr. S. Rajam Aiyar will cease to act as Provincial Textile Commissioner and revert as Assistant Textile Commissioner, from the date on which Mr. N. E. S. Raghavachari assumes charge.

Dr. J. J. Rudra, Principal of the College of Engineering, Guindy, has been appointed to act as Principal of the Arthur Hope College of Technology, Coimbatore.

Mr. V. Ramakrishna, I.C.S., whose appointment as Industrial Adviser to the Government of Madras was announced recently, it is officially stated will, on return from his tour abroad to study the working of industries, be in charge of Planning and Development of Industries, and not Director of Industries, as reported.

The Government of India have appointed, for a period of one year in the first instance, the following persons as members of the All-India Handloom Board to represent Madras Province: Messrs. S. Venkateswaran, Provincial Textile Commissioner, Madras, M. Somappa, Yemmiganur; M. Viswanatham, Peddapuram, and K. Raghunatha Chettiar, Salem.

Yarn Advisory Body.—The Bombay Government have appointed a Yarn Distribution Advisory Committee to advise the Provincial Textile Controller in regard to the distribution of the yarn quota allotted to the province.

The members of the Committee are:—The Provincial Textile Controller (Chairman); the Director of Industries or his nominee; Mr. Seth Jethabhai Khatau (representing the Bombay Yarn Exchange); Mr. Purshottamdas Popatlal, Mr. Ratilal Dayabhai and Mr. Nathalal Maganlal (all representing the Yarn Merchants' Association); Mr. S. S. Sakri, Chairman of the Industrial Co-operative Association, Bagalkot; Mr. Z. A. Kaikani, President, Millowners' Association, Malegaon; Khan Saheb Abdul Samad Haji Lal Mohmed of Bhiwandi, Mr. Nagindas A. Kharwar and Mr. Shifa Ul-Mulk-Hakim Sarfraj Hussein (all representing weavers in Bijapur, Nasik, Thana and Surat); and Mr. Latif Jafri (representing Bombay City Weavers' Co-operative Society).

Four temporary posts of District Industrial Officers have been created by the Bombay Government, and the following have been appointed to them:—

Mr. N. S. Bijur, Poona; Mr. D. N. Kashalkar, Kaira (with headquarters at Anand); Mr. M. H. Valavalkar, Sholapur; and Mr. S. M. Patil, Bijapur.

Mr. M. Vishwanathan, Spinning Superintendent, Birla group of cotton mills, left India for the United Kingdom by air in the first week of June. He will on behalf of Messrs. Birla Bros. Ltd., inspect the latest machinery, methods of production and management of the textile industry in the United Kingdom and then proceed to the U.S.A. He is expected back in India about the month of September.

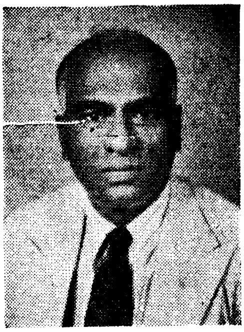

Photo: Hamilton Studios, Bombay

Mr. M. V. N. Iyer, Technical Expert and Sales Manager of the well-known firm, Messrs. Nagindas Kilabhai & Co. of Bombay, Ahmedabad and Calcutta, will be shortly proceeding to England, U.S.A., and other foreign countries on behalf of his firm to develop their business activities in dyestuffs, chemicals, sizing materials and other millstores essential for the textile industry. In this connection, it may be recalled that Mr. Iyer is a chemistry graduate of the Madras University and was the Chief Dyeing, Bleaching and

Finishing Master of The Indore Malwa United Mills, Indore, for several years prior to his joining Messrs. Nagindas Kilabhai & Co. He had also worked successfully in the dyeing and bleaching departments of the Jiyajirao Cotton Mills, Gwalior, and the Aryodaya Spinning and Weaving Mills of Ahmedabad, as also in the laboratory of Messrs. Havero Trading Co., Bombay.

Sir Clive Baillieu, K.B.E., C.M.G., has been elected President of the Federation of British Industries in place of Sir George Nelson, who has retired from the presidency, having held office for two years.

On the formation of the Export Council in 1940, Sir Clive Baillieu was appointed an executive member. In January 1941 he became Director-General of the British Purchasing Commission in the United States. A year later he was appointed head of the British Raw Materials Mission in the U.S. and the British representative on the Combined Raw Materials Board. On his return to England in 1943, he retired from these posts and was elected Deputy-President of the F.B.I. and subsequently Chairman of its Empire Committee. Sir Clive represented the Federation at the International Business Conference in the United States in November last year, where he was Chairman of the Committee on cartels.

Sir William Clare Lees, Bart., O.B.E., has been unanimously elected as an Emeritus Director of the Manchester Chamber of Commerce, the highest honour that can be bestowed on a member of the Chamber. He was elected a Director of the Chamber in 1916 and has thus served continuously for more than 29 years. He became Vice-President of the Chamber in 1920 and President in 1922.

Photo: Elliott & Fry

In the years 1931-32, Sir William was President of the Association of British Chambers of Commerce and the older members still talk of the splendid work he did for the Chamber of Commerce movement. He also took a great interest in the work of the International Chamber of Commerce.

In 1933, when the Lancashire textile industry sent its first Mission to India, Sir William was asked to lead it, which he did with great distinction. Shortly after the return of the Mission when the Indian tariff and other problems were exercising a lot of thought, Sir William was asked to preside over the Lancashire Committee on Indian Trade Relations and is still Chairman of that body.

Mr. G. A. Barnes, who has been elected President of the Federation of Master Cotton Spinners' Associations, Manchester, England, is General Manager of Musgrave Spinning Co., Ltd., Atlas Mills, Bolton.

Mr. H. S. Butterworth, Chairman of the Ash Spinning Co., Ltd., Shaw, is now the senior Vice-President of the Federation, and Mr. John Lindley, Chairman and Managing Director of Peel Mills, Ltd., Bury, junior Vice-President.

Mill Staff News

Mr. Kavasji Framji Dastur, B.A., Weaving Master of Tata Mills, Bombay, has retired after 32 years' service.

Mr. R. Rama Iyer, D.T.M. (Hons.), formerly of Sri Minakshi Mills, Madura, has been working in the Delhi Cloth Mills since May 1945.

Open for Engagement

Mr. B. Mohan Ranga Rao, who received practical training in the preparation and weaving departments of the Bangalore Woollen, Cotton, and Silk Mills Co., Ltd. as a probationary assistant from July 1943 to December 1944 is now open for engagement. He obtained a second class in the supervisor course certificate examination in power spinning and weaving conducted by the Government Textile Institute, Madras, in 1939 and a first class in plain cotton weaving in the final examination of the City and Guilds of London Institute in 1942.

In November 1940 Mr. Mohan Ranga Rao joined the Sri Krishnarajendra Mills, Ltd., Mysore, as an apprentice, worked in the weaving preparatory department and helped in the erection of looms. For about six months he worked in the spinning department as well and has a fair knowledge of the carding and spinning processes, and maintenance of spinning machinery. He was weaving supervisor at this mill when he left it in order to improve his prospects. His Bombay address is c/o V. S. Prakasam, Sarojini Nivas, Plot No. 33, Shivaji Park Road No. 2, Dadar, Bombay.

* * *

Situation wanted as Spinning Master and Manager or as Consultant Textile Engineer of Cotton Mills by a reputed Textile Expert. Wide experience. Excellent references. Write for terms to Box No. X "The Textile Journal," Military Square Lane, Bombay.

Obituary

Mr. Muljibhai P. Shah

We regret to record the death of Mr. Muljibhai P. Shah, B.A., partner of the firm of Messrs. C. P. Shah and Bros., mill gin stores suppliers, Sandhurst Road, Bombay, on 28th June, 1945.

Mr. Shah was born in 1895 and after graduating in 1917 joined the firm of his brother and helped to extend the business on progressive lines, having established several branches in Central India. He was one of the founders of the Mill Gin Stores Merchants' Association and became its secretary from the beginning and held that position until his death. Mr. Shah was very popular with the merchants of his line and was always keen on promoting the interests of the merchants through the Association.

India and the Middle East

Market for Indian Textiles

THE Middle East, according to the India Government Trade Commissioner in Alexandria, "should provide a good market for Indian piecegoods, now that Japan's competition is likely to be eliminated for some years. In view of the introduction of a great variety of Indian piecegoods whose quality and workmanship have been well commented upon, we might hope that a fair portion of the Indian trade in piecegoods will continue after the war. To bring this about, concentrated action is necessary to see that Indian goods are supplied according to samples and specifications and manufacturers pay special attention to create a good name for themselves."

The varieties of cotton textiles which will find, according to his report, a good market in the Middle East countries are: grey goods such as sheetings, grey prints, grey mulls, grey voiles and other grey fancy goods; dyed goods such as dyed poplin, dyed cambrics, dyed drill, dyed satin and dyed voile; yarn dyed goods such as striped poplin and striped shirting; and white shirting and white mulls.

Discussing the export prospects of different Indian commodities to the Middle East countries, the report concludes that the trade in jute manufactures has well developed and as India has a virtual monopoly we may expect it to continue.

Plea for Industrial Research in India

England's Noteworthy Example

IN the course of his presidential address at the latest annual session of the Indian Science Congress, Sir S. S. Bhatnagar, Kt., O.B.E., D.Sc., F.R.S., observed as follows:

" British industry in the past relied too much on tradition. It is now realized that the prosperity of Britain after the war will depend as never before upon the efficiency and progressiveness of her industries. Happily, for it is a most healthy indication of things to come, industrial and scientific research is on almost everyone's lips nowadays and it is certain that this will be one of the major features in post-war industry. In certain industries in Britain, such as the chemical industry, the application of science and research has reached such high levels already that even the Department of Scientific and Industrial Research has not considered it an imperative necessity on their part to equip and maintain their Chemical Research Laboratory to the same level of efficiency as their National Physical Laboratory. They maintain that the Imperial Chemical Industries conduct research on such a large and liberal scale that the Government Laboratories need not compete with them. The Directors of the company are progressive in their views on scientific development and at a luncheon which the I.C.I. gave to the Indian scientists at Claridges, Lord McGowan, the Chairman, reported that the Directors of the company had offered to provide at nine universities of Great Britain, eighty fellowships of the average value of £600 per annum to be held by senior workers in certain sciences. The research organization of the company itself consists of nearly nine hundred fully qualified chemists, physicists, biologists, engineers and other scientific men and more than a thousand skilled assistants. During 1943 its expenditure on research and development in its own work was approximately £2,200,000; and in addition, £12,500,000 became due from the company to the British and Overseas Governments under the heading of Excess Profits Tax, National Defence Contribution and income-tax. We had the good fortune to see their vast factories and research organizations at Bellingham, Blackly and Huddersfield, and our distinguished industrialists who are visiting England should go and see these signs of research-mindedness of the British industries.

" When I replied to the toast proposed by Lord McGowan at the luncheon, I spoke of the I.C.I.'s partiality to their own country. They had at least two big factories in India and I pleaded for grants on a generous scale for scholarships for scientific research in India by the I.C.I. I urged that no feast given to the Indian Brahmins is complete without a gift, and that all scientists are Brahmins by profession. The plea went home to Lord McGowan and he promised to consider in a friendly way the question of endowing research fellowships in Indian Universities. He also assured us that the eighty fellowships in the British universities were open to Indian scientists in free competition.

" Besides the I.C.I., there are other industries in Britain which have large research departments, and we were particularly impressed by the efforts which had been made by such firms as Metropolitan-Vickers at Trafford Park, Manchester, by the General Electric Company at Wembley, by Burroughs Wellcome, by Brown Firth & Co., by the B.T.H. at Rugby and by the Anglo-Iranian and Shell group organization. In addition to the many private investigations carried out by individual firms, the interests of research by industry are safeguarded by investigations carried out in twenty-four Industrial Research Associations, which are maintained jointly by Industry and the Department of Scientific and Industrial Research.

" We are aware of even more outstanding organizations of this kind in the U.S.A. and Canada and look forward with eagerness to visiting the Bell Telephone Laboratories in New York in which the American Telegraph and Telephone Company employ over 4,000 scientific workers and technical men. The General Electric Company at Schenectady, N.Y., the Eastman Kodak Company at Rochester, N.Y., the Mellon Research Institute, Pittsburgh, and the various petroleum companies in the U.S.A. have fully equipped laboratories which work day and night on problems of fundamental and applied interests.

"If Indian industry has to rise, and rise it must to its proper stature in time, it must begin to devote more attention to expenditure on research. There is hardly any industrial organization in India except Tatas which provides even reasonable facilities for scientific and industrial research. Lately Mr. G. D. Birla and Sir Shri Ram have shown some interest in scientific research, but much has yet to be done by science to save the existing industries in India from extinction by outside competition after the war.

"The newly started industrial units of India should join together and form Industrial Research Associations and the Council of Scientific and Industrial Research and the Government should subsidize the organizations so that they may blossom forth into hopeful industries of the future India.

"Now that expenditure on research, both capital and recurring, is likely to be free from the excess profits tax, Indian industry should give a real impetus to science.*"

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*For the latest allowances announced by the Finance Member of the Government of India, please see *Indian Textile Journal*, March 1945, page 368.

Textile Machinery for Canada

British or American ?

ACCORDING to the Dominion Bureau of Statistics, imports of textile machinery into Canada have been very well maintained during the war. Total value of imports in 1944 is estimated at about $4,000,000, against $3,000,000 in 1943, $5,700,000 in 1942, $6,400,000 in 1941, $6,668,000 in 1940, and $4,166,000 in 1939. Prices of machinery imported last year were 25 to 35 per cent. above pre-war levels.

During the ten years from 1930 to 1939 inclusive Canada's total imports of specialized textile machinery were valued at $35,500,000. In that period imports from Great Britain were valued at $6,842,000, and from the United States $26,807,000, the remainder being from Germany, Switzerland, France and Italy. In the period mentioned imports from Great Britain amounted to about 20 per cent. of the total, and from the United States about 74 per cent. From 1939 until the end of 1942 Britain maintained her position as a supplier of 20 per cent. of Canada's needs, but her shipments declined in 1943 and 1944 through the agreement whereby Canada confined her purchases to the United States, except where urgently required machinery could not be obtained in that country. If Britain is to obtain orders for large quantities of textile machinery for shipment to Canada she will have to give some indication of relatively early deliveries, otherwise much business will be placed with American firms, says *Textile Mercury and Argus*.

The problem of labour-management relations is one which must, in the first place, be dealt with by the individual concern. Many firms have appointed personnel managers, with special skill in this field of administration, to assure satisfactory results. The employers' groups have several working committees devoting their efforts to more efficient utilization of labour. They have co-operated closely with National Selective Service officials and much good work has been done.

It has been suggested that the textile industry establish a central labour office, either independent of or affiliated with, the Primary Textiles Institute. As visualized at present it would act in a capacity similar to that of the International Labour Office which is now functioning with a skeleton staff. The textile office would be concerned with the formulation of policy applicable to the peculiar and special problems of the textile trade. It would be an advisory body, with a staff of well trained, experienced and competent conciliators. It could make a tremendous contribution to the settlement of disputes, the establishment of wage rates and offer recommendations on working conditions. This proposal deserves the most serious consideration of the industry as a whole.
—*Canadian Textile Journal.*

On Clothes

By J. P. DE'SOUZA

(*Specially Contributed*)

IT is a far cry from fig-leaves to ration-cards (due to acute shortage of cotton cloth in the country, it is at present being rationed) but together they make us think of clothing as a human habit. Quite significantly, the term "habit" has been applied both to clothes and to conduct. We wear clothes as unconsciously as we would do any of the other normal actions like eating or walking or lying. It was Samuel Butler, if we are not much mistaken, who once described clothes as a "post-natal" growth and argued that babies grow their boots almost as naturally as they grow their hair !

Adam and Eve, we presume, wore fig-leaves primarily to hide their shame (they must have become shamefully conscious after the Fall) but the first spiritual want of a barbarian, according to Professor Teufelsdröckh, has been decoration. We don't like to think of our ancestors as barbarians, yet one of the first things they did was to go about and find some means of decorating themselves. Their first garment was a coat of paint with tattoo marks as its trimmings.

This instinct for ornament has been ever present in man throughout the ages, an instinct which has found an outlet in the beauties of nature, for he has always been largely influenced by the natural environment within which he has had his existence. He liked the glossy wing of the bird; the delicacy of the spider's web; the softness of the swan's down; the thickness of leather, and from these impressions sprang notions of clothing for his own species.

Savage tribes made their clothing from the bark of trees, cutting thin sheets from the inner rind of the bark and flattening them out so as to make yards of covering, and this later led to the idea of plaiting together straw or bark strips. Thus arose the gradual development of crude means of hand spinning and weaving which has become such a fascinating art and science to-day.

Whoever it was that said "Clothes make the man" certainly knew what he was talking about. More than any other single factor, clothes express a man's personality; they reflect his temperament and taste; they build his reputation. Dashing, debonair Anthony Eden, Britain's most successful Foreign Minister (tipped as Churchill's successor) is reputed to be the best-dressed man in English public life (is his popularity due to his diplomacy or his Saville Row tailors ?). Clothes have even become a symbol, for have we not during our own times and in our own country, the striking instance of Mahatma Gandhi ? Naked, except for a few yards of loin-cloth, his familiar figure struts across the world stage as a symbol of the poverty of India's naked teeming millions.

There was a time in England during the prosperous days of Victoria and Edward when one found each evening jingling hansoms arriving in droves at the Old English Music Hall bringing the "Quality" in silks and satins, with monocled escorts, to hear Lottie Collins and Albert Chevalier. That certainly was a comfortable age ! To-day, the silks and satins have temporarily disappeared, but the "Quality" still exists (one wonders) only you'll find it in canteens and factories and hospitals uniformed in drab khaki monochrome or blue or white, doing men's jobs and making a job of it ! Yes, "Quality" still exists and so do "Esquire" and "Vogue" and the fashion-hounds. They may temporarily have gone backstage, but, with peace, they will reappear in "Quality homes," for even if six long years of war have burnt Europe's face flat as a pancake and left us all weary and tired of controls and the like, clothes are still, and will always be, an intimate part of our lives.

After this war,—what ? In time, we hope, a new world, a world of peace and plenty for all. Not that Wellsian world, cold as chromium, run on synthetic hormones and electric robots, with men dressed, maybe in coarse utility garments, that has been pictured for us; but a world in which drab and cluttering clothes that reflect a similar attitude to life yield before clothes that give to men the grace and glory of flowers and beasts. In the fulfilment of such a hope lies much of the future happiness of mankind.

Utility Cloth Scheme At Work

Chairman of Control Board Addresses Press Conference

"THE main purpose for which this conference has been called," said Mr. Krishnaraj M. D. Thackersey, Chairman of the Textile Control Board, at a press conference held in Bombay on Wednesday the 11th July 1945, "is to clear, through you, a certain amount of misapprehension that seems to have been created in the minds of the consuming public regarding the ultimate result of the rationalization and standardization measures decided upon by the cotton textile industry. The questions that are being discussed are:—

(i) Will utility cloth serve the needs of the people?

(ii) Will utility cloth give more utility to the interests concerned, namely, the consumer and the producer, specially in view of the mistaken belief held by many that the standard cloth scheme has proved a flop?

"The criticism levelled against the utility cloth scheme is that it will be so woven that it would be like netting cloth, and will not have the usual resistance and the cloth, therefore, will not be as lasting and useful. There is also, of course, the criticism that through this scheme the millowners will make more profits! It is stated that the utility cloth will last only half the period that the other cloth would.

"I am afraid that this criticism possibly may be traced to the fact that the cloth to be produced under the standardization scheme is called utility cloth as against the possibility of non-utility cloth. Perhaps these doubts have been raised because the public may not have been fully possessed of the actual position about the production of such cloth. My sole aim in calling you to-day is to explain what the Indian textile industry is doing under the rationalization and standardization scheme.

Standard Cloth Scheme Not a Flop

"Before proceeding further I would like to remove a totally wrong impression that has been allowed to take shape in regard to standard cloth. In the beginning of the standard cloth scheme, owing to various causes, the most important of which was the unpreparedness of the Provincial and State Governments for the marketing of this cloth, there was an accumulation of stocks. In part, this accumulation was also due to the fact that at that stage there was not the same shortage of cloth that has arisen since. The present position is that in almost all the Provinces and States the stocks of standard cloth have been reduced. The new varieties of this cloth are extremely popular and, so far from being a flop, the scheme has been of the greatest benefit to those Provinces and States that have taken part in it.

"The main object of the scheme for the manufacture of utility cloth is that mills should take such measures as will enable them to increase their yardage production of cloth by at least 10 per cent. over the 1944 figure. Mills are required to set apart 90 per cent. of their available loom energy for the manufacture of utility cloth, which comprises *dhotis*, *saris*, long-cloth, sheetings, chhadars, shirtings, voiles, mulls, coatings and towels made from single yarn. A restriction has been placed on the number of counts which mills are permitted to spin according to the spindles installed. In addition a drastic reduction has been made in the number of varieties of cloth to be produced by these mills, and they are required to concentrate on the production of these restricted qualities, which in itself automatically increases efficiency and production. In order that the mills may make the best use of all yarns woven by them into cloth, the maximum densities of what are termed utility cloths under the scheme (which I would have really named 'non-luxury') have been laid down and no mill is permitted to exceed these limits in respect of such utility cloths. In general, mills have been prohibited to manufacture such qualities of cloth as are wasteful of yarn. For example, mills are prohibited from manufacturing any cloth with folded yarn in warp or weft except in coatings which are to some extent being permitted to be manufactured by use of 2/22s yarn and below within the non-utility range. No mill is permitted to manufacture any cloth with a border whether plain, dobby or jacquard exceeding 2" in width.

Reduction of Picks Does Not Affect Quality

"From my actual experience of the working of the scheme within the short time, I must say that the maximum densities laid down for utility cloths have been very liberal and mills have not found it necessary to alter their qualities materially in order to bring them within the scheme. It is true that some mills have had to reduce the number of picks on some of the qualities, but such reductions in the majority of cases have been adjusted by a corresponding use of coarser weft than formerly. Moreover, actual wear and tear tests taken out on a quality with a certain number of picks and a similar quality with picks reduced by 10 per cent. have shown that the lasting quality of the cloth is not materially affected by reduction in picks.

"Samples of the most popular common varieties of utility cloth at present manufactured by mills are placed before you for inspection and it will be for you to judge the correctness of the statement.

"I must point out in this connection that the industry has for a very long time in the past resisted any attempts to introduce any rationalization and standardization measures, since such measures would to a great extent curtail their encouragement to diversify production, a step which has been recommended by various Tariff Boards as a means to enable the industry to compete with foreign manufactures. However, in the general interests of the country as a whole, the scheme has been accepted by the industry in good faith.

"As regards the allegation that through the introduction of the utility cloth scheme the millowners will increase their profits, I can only say that it is mere moonshine. As a matter of fact, the price structure has been so revised as to discourage mills from manufacturing luxury goods but no encouragement has been given to them to manufacture utility cloth as such."

Textile Control Board Meets in Bombay

"Provincial Distribution Machinery must be brought under Textile Commissioner's jurisdiction," says Mr. K. M. D. Thackersey.

"A stage has been reached when it is necessary for the Government of India to bring the provincial control machinery for cloth distribution within the jurisdiction of the Textile Commissioner with a view to securing uniform application of distribution policy and administration of control measures in all the Provinces and States. Unless this is done, I am afraid that whatever efforts the Board might have made to increase and maintain production, scarcity conditions will continue to prevail in the sense that cloth will not reach the consumer in the manner required."

Thus observed Mr. K. M. D. Thackersey presiding over the meeting of the Textile Control Board held in Bombay on Saturday the 21st July 1945. He was happy to announce that the Government of India had assured the Indian textile industry that, so long as the utility cloth scheme was in operation, they would do their utmost, subject to existing contracts, to avoid the importation into India of cloth superior in quality to that produced under the scheme. Steps were being taken by Government to take the necessary action in order to implement the assurance.

Reviewing the progress of control, Mr. Thackersey stated that the direct outcome of the end of the war in Europe was the 50 per cent. reduction in the total purchases of Indian cloth for the defence services for the half-year ending January, 1946, representing a saving of 8 per cent. of the productive capacity of the mills during that period for civilian needs. He was confident that the improvement would continue thereafter. That fact, coupled with the promised reduction in export of cloth, would increase the cloth supply for civil population by 500,000,000 yards in 1946.

Coal Supplies

As regards ceiling prices, he stated that the basis of the price structure had been revised in such a way as to discourage the mills from manufacturing luxury goods and goods involving wastage of yarn and fuel, but the problem of revising the price levels was complicated owing to uncertainty regarding continuous working of the mills in absence of assured coal supplies.

Replying to points raised during the discussion, Sir Akbar Hydari, Secretary, Department of Industries and Civil Supplies, Government of India, explained that civilian consumers were only concerned with the quantity available for them, and Government's assurance did not affect the import of such qualities of cloth as the industry in India had not been producing before the introduction of rationalization. On the question of coal shortage, he detailed the measures taken in order to relieve the present situation.

The meeting was attended by Mr. H. M. Patel, Joint Secretary, Department of Industries and Civil Supplies, and Mr. M. K. Vellodi, Textile Commissioner.

Bombay Cloth Rationing Notes and News

DIFFICULTY is being experienced by holders of cloth ration cards in Bombay in obtaining varieties to suit their tastes in the third week of cloth rationing. Mercerised stuff of good quality is not available in many of the shops, while several customers go disappointed because they are unable to buy coating against their cards as the stuff that is offered is poor in quality.

The general impression appears to be that finer varieties will be a thing of the past within the next few weeks. From August onwards, the consumer will have to be satisfied with "utility cloth" woven out of yarns below 80 counts.

The mills are at present engaged in manufacturing utility cloth to the extent of 90 per cent. of their capacity.

Coarse varieties are, however, available in plenty, but the demand for these types of cloth is very modest. Complaints are also being received that rationed cloth shops are mostly stocked with unwanted varieties which were not hitherto considered suitable for Bombay people. Instances have also come to light of cloth produced by some of the mills not conforming to the quality stamped on it.

The Executive Committee of the People's Provincial Food Council has urged the Government of Bombay to extend the cloth rationing scheme to the whole of the province without delay. It suggests that the defence requirements be met from imported cloth and that exports of cloth be stopped immediately.

A representation has been made by the Government-approved rationing cloth distributors, group B-3, to the Textile Commissioner pointing out that there is discrimination between the various dealers in the matter of supply of mercerized cloth. The signatories give details about the supply of cloth to them and seek the intervention of the Textile Commissioner since the Provincial Textile Controller has turned down their request.

Bombay Cloth Rationing Order Amended

At present, under the Bombay Cloth Rationing Order, 1945, the purchase of rationed cloth in Bombay City and the Bombay Suburban District from a rationed cloth dealer is allowed only once in three months. As this may cause hardship in some cases, the order has been amended to allow four purchases during the period of six months, says a Press Note issued by the Supply Commissioner, Bombay. This, however, does not affect the restriction regarding the quantity that can be obtained during the first three months (up to 10 yards per adult and 5 yards per child). The necessary notification has been published in the Bombay Government *Gazette Extraordinary* of 22nd June 1945.

Rationed Cloth: Longcloth Included

Longcloth, whether plain, printed or processed, is rationed cloth in Bombay City and the Suburban District. This is made clear by an amendment of the Bombay Cloth Rationing Order, 1945, necessary notification of which has been published in the Bombay Government *Gazette Extraordinary* of 2nd July 1945, says a Press Note from the Supply Commissioner, Bombay.

The Public Relations Officer (Rationing), in a Press Note, says that rationed cloth distributors in Bombay City and the Suburban District cannot refuse to show or sell to registered customers any variety of rationed cloth in stock. The public are informed that such refusal should be reported immediately with full particulars to the nearest Ward Rationing Office or the Public Relations Officer (Rationing).

Funeral Cloth In Bombay Suburbs

In order to remove inconvenience to the residents of villages in the Bombay Suburban District, cloth for funeral purposes is made obtainable on production of a certificate of death from the local police patil instead of on a medical certificate, says a Press Note issued by the Supply Commissioner, Bombay.

Cottonseed Export Ban

The Bombay Government have banned the export of cottonseed from within the limits of Bombay City and the Bombay Suburban District to any place in India outside, except under a licence. Licences are granted by the Director of Civil Supplies and the Milk Commissioner, Bombay.

Cotton Baling Hoops Order

By a notification published in the *Gazette of India* the Central Government have removed the restrictions imposed on movement of cotton baling hoops. The Cotton Baling Hoops (Control of Movement) Order, 1943, has been cancelled with immediate effect. This step has been taken owing to the change in the supply situation and the desirability of relaxing control measures as soon as possible.

Control Notifications: Imports of Foreign Cloth

By a notification in the *Gazette of India* of 9th June, the Textile Commissioner has directed all importers of foreign cloth into India to submit either personally or by registered post a statement containing the description and the quantity of cloth so imported within two weeks of the arrival of the consignment in India. Importers are required to state the landed cost of each item contained in the consignment. Importers are further required to sell or deliver such imported cloth only to those persons specified by the Textile Commissioner. If within 21 days of the date on which the statement is received by the Textile Commissioner the importer does not receive instructions as to the disposal of the consignment, the importer will be free to dispose of the cloth included in the consignment.

Exports of Yarn

In pursuance of Notice Reference War No. 865, dated 7th June 1945, issued by the Export Trade Controller, Bombay, applications are being received by the Textile Commissioner from prospective exporters to the effect that they should be assisted as regards procurement of yarn. These applications having been considered by the Textile Commissioner in consultation with the Export Trade Controller, Bombay, it has now been decided that specific proposals from manufactures for sanction to sell and deliver specified quantities and counts of yarn to exporters holding quotas, granted by the Export Trade Controller, will be given consideration, provided that (1) they are received at least 30 days before deliveries are to commence, and (2) no folded yarn, or single yarn of counts 30s or finer, is proposed to be sold. In this connection, it should be noted that exporters must, in the first instance, make arrangements with individual mills for supply of yarn and thereafter the Textile Commissioner should be approached by the mills concerned for sanction to enter into the necessary contracts.

Packing of Cloth Bales

Pursuant to the notification in the *Gazette of India* of 2nd June 1945, directing manufacturers of cloth in the country not to pack less than 1,450 yards or more than 1,550 yards of cloth in any bale, the Textile Commissioner to the Government of India has notified manufacturers that the order does not apply to cloth for Defence Services, or to that intended for export; nor does it apply to handloom factories. He has further informed manufacturers that where they find it difficult or impracticable for one reason or another to pack in full bales as specified above, they may pack cloth in half bales containing not more than 800 yards or not less than 700 yards, or quarter bales containing not more than 400 yards and not less than 350 yards provided that they clearly mark on the outside of such bales in letters not less than 3 inches in height the words HALF BALE and/or QUARTER BALE, as the case may be.

Manufacturers who submit returns to the Textile Commissioner, should hereafter clearly specify in the returns whether the bales mentioned therein are full bales, half bales, or quarter bales as the case may be.

Imports of Fine Goods

Replying to certain points raised by members of the Textile Control Board in their speeches following the Chairman's speech, the Hon'ble Sir Akbar Hydari, Secretary to the Government of India in the Department of Industries and Civil Supplies, said that so far as imports of cloth are concerned, the civilian consumers are mainly concerned with the quantity imported. The assurance of the Government of India given to the industry refers only to the question of not importing better qualities than those that are being produced in this country as a result of the introduction of the rationalization scheme. This, however, does not affect the import of such qualities of cloth which the industry in this country was not producing before the introduction of rationalization.

Referring to the coal shortage, Sir Akbar related the measures which were being taken to relieve the present situation and to provide that it should not recur in the future.

The Cotton Cloth and Yarn (Control) Order, 1945

By a notification published in the *Gazette of India* dated the 21st July 1945, the Central Government has promulgated the Cotton Cloth and Yarn (Control) Order, 1945, which is a *verbatim* reproduction of the Cotton Cloth and Yarn (Control) Order, 1943, as amended from time to time. The order comes into force immediately and provides that all notifications and orders issued under the old order are to be deemed to have been issued under the new order. The Cotton Cloth and Yarn (Control) Order, 1945, provides for the constitution and procedure of the Textile Control Board as before, and authorizes the Textile Commissioner to fix the prices of cloth and yarn and the markings to be made thereon. One of its provisions prohibits the sale, purchase or possession of any cloth after the expiration of six months from the date of marking; and by another provision a maximum limit has been placed to the quantities of cloth and yarn which any person may hold in his possession. The order also makes provision for the distribution of cloth and yarn. The sales of cloth and yarn by manufacturers are canalised, by restricting them to the dealers who purchased from them in 1940-42, and to quantities in proportion. And the order also gives power to the Textile Commissioner to control the distribution by appropriate orders directed to mills or dealers.

Dyes and Chemicals Control

By a notification in the *Gazette of India* dated 14th July, the Government of India have promulgated the Cotton Textiles (Dyes and Chemicals) Control Order, 1945, which requires every importer of dyes or chemicals to furnish to the Textile Commissioner within 15 days of the arrival of any consignment of dyes or chemicals in India correct information regarding the description and quantity of each such dye or chemical, the landed cost of each item together with invoices, etc. Importers should not sell or otherwise dispose of such dyes or chemicals unless they have been instructed by the Textile Commissioner. Those who desire to sell or deal in dyes or chemicals, can do so only after obtaining a licence from the Textile Commissioner for the purpose. Under the order, the Textile Commissioner can prohibit the possession of dyes and chemicals in any specified area by any person unless he holds a permit granted by him in this behalf. He is also empowered to fix the maximum prices at which dyes and chemicals may be sold. This order, which comes into force immediately, is in supersession of a similar order promulgated in 1944.

Commission Agents' Goods Frozen

By a notification published in the *Gazette of India Extraordinary* dated 18th July 1945, the Blanket Freezing Order of the 16th December 1944 which was re-issued on the 11th June 1945, has now been amended bringing within the purview of the order commission agents and other dealers who, acting on behalf of quotaholders, take delivery of cloth from a manufacturer in a manufacturing centre. The effect of the notification is that such commission agents and dealers are prohibited from selling the cloth of which they have taken delivery except in accordance with the permits issued by the Textile Commissioner or under his authority.

Cloth Printing Control

The Cotton Cloth (Control of Printing) Order, 1945, has been promulgated by the Central Government and published in the *Gazette of India* dated 7th July 1945. The order prohibits the sale, purchase or disposing otherwise of a cloth printing machine by any person whether or not in performance of a contract made before the date of publication of the order. It also directs that no person shall work a cloth printing machine which was not in his possession installed in working order during January 1945, besides prohibiting any producer or printer to work a printing machine or cause or permit it to be worked continuously for more than a single shift a day not exceeding 11 hours. No mill or powerloom factory can hereafter hand-print any cloth produced by it or send such cloth outside for printing by any process whatsoever. The other provisions of the order restrict the qualities of cloth which can be printed and specify the nature of the printing to which such cloth can be subjected and the various disabilities of persons or producers in respect of printing of cloth. The order prohibits printers from buying any cloth for printing or selling any cloth printed by them except under certain conditions. Dealers who desire to print or get their cloth printed, can do so only after obtaining a written permit from the Provincial Textile Authority concerned. The Textile Commissioner is empowered to exempt any person or class of persons from the operation of any of the provisions of the order which comes into force with immediate effect.

Art Silk Fabrics : Conditions for Addition to Maximum Price

For the purpose of determining the maximum sale price chargeable by a dealer in respect of imported artificial silk fabrics, the Controller-General of Civil Supplies has, by a *Gazette* notification, sanctioned an addition to the landed cost of a sum representing 10 per cent. of the landed cost, where the sale is made by the dealer who imported the article to another dealer; 15 per cent. of the landed cost, where the sale is made by any other dealer to another dealer, and 35 per cent. of the landed cost in any other case.

Octroi and other local cess actually paid by the seller may also be added if the article is sold or delivered at a place other than a port. Freight and packing charges are included in the percentages of profits as specified above, and should be borne by the consignee.

Production of Raw Silk

All producers of art silk fabrics have been directed by the Controller-General of Civil Supplies by a notification published in the *Gazette of India* dated 30th June 1945, to furnish on or before 30th June 1945, to the Deputy Controller-General of Civil Supplies, Bombay, detailed information in a prescribed form.

U.N.R.R.A. Mission Visits India

AN U.N.R.R.A. Mission arrived in India some time ago. Its main object was to explore the possibilities of purchase in India of essential commodities which this country can spare and which are needed for the relief of countries freed from the enemy.

India's contribution to U.N.R.R.A. as approved of by the last budget session of the Assembly amounts to Rs. 8,00,00,000. The Mission may purchase in this country within this sum, in which case the purchase amount will be credited towards India's contribution. If it so chooses and conditions are favourable here, it may purchase even more, in which case the purchases will have to be paid for from the funds of the Administration.

The mission was headed by Mr. Francis B. Sayre, U.N.R.R.A.'s diplomatic adviser, who was accompanied by Mr. R. V. Gogate, an Indian sociologist attached to U.N.R.R.A.'s Bureau of Supply. They spent about a month at New Delhi and discussed with the Government of India the question of supplies which U.N.R.R.A. is procuring against Indian contributions. It was proposed to station a permanent officer of U.N.R.R.A. at New Delhi in connection with the supply problem.

The Committee of the Federation of the Indian Chambers of Commerce and Industries, addressed a communication to the Government of India, urging them to announce their policy in respect of releasing supplies, particularly textiles and foodstuffs from India, for the population of liberated countries. The Committee stated that India could ill-afford to release such materials for purposes of relief, particularly when India herself was experiencing scarcity of foodstuffs and textiles.

It drew the attention of the Government of India to a report that India's contribution to the U.N.R.R.A. fund is Rs. 15 crores and recalled that, according to the budget presented at the last budget session, India's contribution had been earmarked at Rs. 8,00,00,000. The Committee had asked the Government for clarification on this point.

In an interview Mr. Sayre made it clear, however, that the purpose of the Mission was to collect the dues of member countries in the form of only those goods of which they have surpluses after meeting their domestic needs.

Commercial and Technical Organizations

Indian Merchants' Chamber, Bombay

Visit of the Commerce Secretary.—When the Committee of the Chamber met the Commerce Secretary of the Government of India in June 1945, several subjects of current interest were discussed.

In the course of his speech, Mr. M. A. Master, President of the Chamber, dealt, *inter alia*, with import and export policy and urged the importance of creating conditions in which India's raw materials could be utilized within the country itself. Exports of raw materials will have to be replaced largely by exports of semi or fully manufactured goods. Instead of exporting cotton India would prefer to export piecegoods and retain the export markets that it has built up.

Referring to the international co-operation in trade and commerce which is so much the vogue of the day, Mr. Master finds it difficult to visualize how far the claims of Indian industries for protection are going to be sacrificed under the cloak of international co-operation.

"So far as the import policy is concerned," continued Mr. Master, "it is essential that the first place on the list of imports should be given to the import of capital goods, machinery, plant, etc., needed not only for the rehabilitation and re-equipment of the existing industries, but which are also essential for the starting of new industries in the country. The next place of importance should be given to the import of spare parts and other requirements which may be essential for enabling the existing industries to work at their full capacity and the import of such producer goods, i.e., such raw materials and working stores, as might be required for the manufacture of consumer goods in this country. The real objective, therefore, of our import policy should be to import such plant, machinery and spare parts as might develop to the fullest extent possible the productive capacity of our existing industries and as might ensure the establishment of new basic and other important industries in the country. It will, therefore, be recognized that any import policy which militates against the development or the economic maintenance of the existing industries is bound to prove seriously harmful to the true interests of this country."

Mr. Master expressed the fear that the industries which got relief as a result of Government's policy regarding imports of consumer goods may not continue to get the required facilities such as coal, transport, essential equipment, etc., which they have been getting at present. Some of the industries have had actually to stop work. Other industries have seriously suffered in production. "For instance, the mill industry suffered from a reduction of production to the extent of over 25 million yards of cloth in one month only, namely, January 1945, owing to the shortage of coal. I wonder whether the Hydari Mission could not secure an assurance from His Majesty's Government that all bunkering arrangements for their naval and merchant ships on this side would be met with the help of British or other coal, so that the Indian coal thus saved might be utilized for increasing the production of the existing industries in the country.

Trade Commissioners

"We welcome the announcement that more Trade Commissioners for India are to be appointed abroad as part of the Government of India's plan to secure for India a fair share of the world's export trade. It is, however, essential to ensure that the personnel selected for that purpose should be such as will be in a position to give an intelligent, useful and full service to commercial interests. May we suggest that this can be achieved by drawing men for these positions from fields where useful knowledge and experience regarding trade, commerce and industries already exist. The specialized knowledge and training of such a personnel will be of great utility and service in the fulfilment of the task with which they will be entrusted. It is also desirable that more opportunities for a free interchange of views between such Trade Commissioners and the trade interests should be arranged in the future than in the past.

Tariff Policy

"We shall be grateful if you can enlighten us as to how the tariff policy that may be evolved by the Commerce Department will safeguard the interests of the existing industries as well as the industries that may be started hereafter against internal competition and foreign aggression and what machinery is going to be immediately set up for the protection of a large number of industries which have helped to sustain the national economy during the period of the war."

Replying, Mr. N. R. Pillai, Commerce Secretary, assured the Chamber that no harm at all was done to India by the U.K.C.C. and that as a result of the joint consultation and co-operation of the Government of India and the U.K.C.C. a decision was ultimately taken to close the U.K.C.C.'s Indian offices.

The Government of India had recently decided to establish an organization in the U.K. for the purpose of sponsoring India's post-war civil requirements, especially for capital goods, and for facilitating their procurement. Mr. P. C. Chaudhuri, Joint Chief Controller of Imports, had been deputed to the U.K.

With regard to conditions for international co-operation, Mr. Pillai observed that it would be foolish for India to say that she would not participate in international conferences. The whole world was entering upon a larger sphere of life, and India could not afford to pursue an isolationist policy. This did not mean, however, that while making her contribution to international co-operation India should not take steps to protect her legitimate national interests.

With regard to the paragraph of the Memorandum dealing with the fundamentals of import policy, Mr. Pillai said that import priorities must be determined at any given time by the special circumstances of the moment. The position in India to-day was that there was acute shortage of consumer goods, and the highest priority must, therefore, naturally be accorded to the importation of such goods. Mr. Pillai did not think that this policy had injuriously affected India's war-born industries. The position of these industries had recently been carefully considered by Government, and as the Committee were aware, in the recently published statement on industrial policy Government had undertaken to consider the grant of protection or assistance, during the transition period, to such of these industries as had been established on sound lines.

With regard to the retention of import control as a protective instrument, Mr. Pillai remarked that this would not be possible, but he agreed that in regulating the pace and extent of decontrol regard should be paid to a number of considerations, of which not the least important was the need for avoiding undue injury to India's existing industrial structure.

Mr. Pillai then explained the functions and objects of the Middle East Supply Centre and gave it as his opinion, for the confidential information of the Committee, that the Centre was undergoing slow dissolution.

Africa and Overseas Merchants' Chamber, Bombay

Memorandum to Commerce Secretary.—In the course of a memorandum addressed to the Commerce Secretary, Government of India, the Chamber urges the early appointment of a trade mission to Africa and the Middle East and places its views on the future of cotton textile exports. It expresses misgivings as to how the policy with regard to India's exports and imports will be worked out and whether it will be calculated to consolidate the position now obtained as the result of substantial sacrifices. The trade in cotton piecegoods with the African, Arabian and Middle East countries, they urge, should at least be maintained at the present level. Government is said to be contemplating a 33 per cent. reduction in the export quota of piecegoods. In any case, "we submit, if there is going to be any curtailment, it should not be so much and should not at all be allowed to be made in the markets just adjacent to India, viz., the African, Arabian as well as Middle East markets in which Indian goods were introduced even before the war. The Chief Controller of Imports should be allowed to lay down a broad policy under which the African, Arabian and the Middle East countries produce could be imported under an Open General Licence."

The Chamber considers that the Department of Industries and Civil Supplies is too much preoccupied with the internal position and is unable to give due attention to the needs of the exporters. "It the quota for export purposes, viz., 600,000,000 yards, is not maintained, India's post-war prosperity is bound to be in jeopardy. India cannot hope to establish heavy industries all at once and hence at present India's textile industry is the only principal means whereby India can sell her finished goods to her neighbours. If present curtailments in the export quota figures are to continue, India will certainly lose her markets in the Middle East, Arabia and Africa, as the other countries are out to capture these markets which are the only assets which have accrued to us out of sacrifices entailed by the war."

Groupings of Cotton Manufactures

For purpose of export, cotton manufactures are divided into four groups. Some of the cotton manufactures are shipped on the basis of weight while the rest on value. Shipments of cotton manufactures under a single heading should be allowed. The export quotas often lapse under the present system. To avoid loss to the exporter, the Export Trade Controller should grant licences at the most in two groups, one on weight and the other on value.

War Risks (Goods) Insurance Ordinance.—Under the ordinance the War Risk Advisory Committee held that "the insurance of goods held for export outside British India was voluntary," a position which the exporters had, therefore, taken for granted, on the reasonable inference that goods that are not for sale in British India are not compulsorily insurable. The Chamber urges, therefore, that the War Risks Insurance officer should be informed that 'goods held by an exporter against a valid export licence are not compulsorily insurable and that the exporter should, therefore, be exempted from payment of premium at least up to 7th November 1944.

Reduced Export Quotas.—Owing to a reduction in the allocation of export quotas the turnover and profits of the established exporters are reported to have been adversely affected. The exporters' position has been aggravated by the Government's policy of granting quotas to refugees from Burma and other countries ; this goes against Government's own accepted principle of 'quotas on basis of past performance.' The encroachments made upon the small export field still open to the established shippers by these evacuee exporters are so serious that Government is urged to revise their policy, and accord at least the same treatment to refugees and to shippers who have been in the line for generations.

Andhra Chamber of Commerce, Madras

Utility Cloth.—In a communication addressed to the Commerce Member, Government of India, the Chamber dwells on the adverse effects of insisting on the production of large quantities of utility cloth and on the need for encouraging the production of other varieties as well. Indian mills have of late been well-known for some of their fine and super-fine lines of manufacture, so much so there was little demand for imported cloth for a decade or two before the war.

The texture and design of the utility cloth do not appeal to the public. It is feared that if the output of the Indian mills is restricted to a very large extent to the production of so-called utility cloth there is a great likelihood of the Indian markets being flooded with foreign cloth of various designs leading naturally to foreigners capturing the Indian market. This would, of course, have ultimately disastrous effects on the Indian textile industry which has now stabilized its position by catering to every kind of Indian needs. By restricting the production of utility cloth to a stereotyped design and particular varieties the average person who has been accustomed to use finer varieties of cloth will be handicapped and ultimately driven to the purchase of finer and attractive varieties dumped by foreign markets. The kind of utility cloth that is sought to be produced should be one which would satisfy the expectations of the middle-class man.

Considering all the above circumstances the Indian mills may be asked to manufacture a reasonable proportion of finer cloth with varieties of designs and colours to satisfy the needs of the various classes of the public, so as to safeguard the Indian textile industry against unfair foreign competition.

Madras Yarn Merchants' Association, Madras

Annual General Meeting.—The seventh annual general meeting of the Madras Yarn Merchants' Association was held in the third week of May 1945, Mr. Kissendoss Girdhardoss presiding.

In his opening remarks, the President referred to the success of Government's control measures as compared with conditions in Bengal. He paid a tribute to the tact and ability of Mr. S. Venkateswaran, I.C.S., Provincial Textile Commissioner and to the co-operation which the trade had willingly given.

Visualizing the possibility of control containing in some form or other even after the Peace Treaty is concluded, the President suggested that it might be relaxed in some respects. The limiting of the issue of licences to dealers of three years' standing should be cancelled and a free opportunity afforded to all those who had for long been in direct or indirect connection with the yarn trade. Further, trade associations might, with advantage, be consulted in the formulation of control measures oftener than before. And when control is relaxed the Provincial Textile Commissioner might consider the desirability of widening the sphere of operation of the Madras market by including in it such adjacent districts as North Arcot, South Arcot and Chingleput. Further, whenever a licence is rejected or cancelled the aggrieved party should be given the right of appeal to the Provincial Textile Commissioner. There must be an appellate authority over the authority issuing a licence.

The President expressed satisfaction with the way in which the system of arbitration to settle disputes between members had worked.

Karachi Chamber of Commerce, Karachi

Fixation of Basic Period for Grant of Import Licences.—The Karachi Chamber has protested to the Government of India against having the year 1-4-1941 to 31-3-1942 as the basic year for calculating the quota to be given to the importers on the ground that it was a war year and imports during that year by no means represented the normal volume of business Karachi importers were having with U.K. manufacturers before the war. They urge, therefore, that the Government of India should fix any three consecutive years between 1935 and 1939 as the basic period for the grant of import quotas.

Fuel for Cotton Ginning and Pressing Factories.—With a view to decreasing the strain on firewood for military and other essential purposes, the Chamber has urged Government to make available to cotton ginning and pressing factories in Sind 35,000 tons of Bengal coal in the next season, and that for this purpose the railway wagons carrying grain to the East from Sind might be used on their return journey.

Compensation for Involuntary Unemployment.—The Chamber considers that the responsibility for the payment of compensation to workers due to unemployment caused by shortage of coal and raw materials or to changes in the manufacturing lines should normally be that of the Government and not the employers. The enforcement of compensation of this nature should be confined to industries wholly engaged on war work.

Textile Stores and Machinery Merchants' Association, Bombay

Quarterly General Meeting.—The first quarterly general meeting of the Association was held on 7th July 1945 with Mr. R. M. Nanavati, President, in the chair. More members have joined the Association and the membership stood at 161 on 30th June 1945. During the period under review the Association considered, *inter alia,* import licences for mill-stores and ropes and tapes, card cans and sizing materials industries. It met Government representatives and had discussions on shuttles and ceiling prices of pickers, and presented its case for representation on the Priority Assistance Committee.

There was a free and frank exchange of views regarding the difficulties experienced by the members in the conduct of their business, post-war business developments, transport difficulty, and promotion of new industries.

In the course of his presidential address Mr. Nanavati referred to the latest political developments in the country and the Government's statement on industrial policy. India would require about 10 million spindles and 2 lakh looms in the next 10 years and it might have to import them from England, the U.S.A. supplying the other machinery. The problem, as Mr. Nanavati put it, is, " whether the United Kingdom will be able to release the necessary sterling amount out of our accumulated balances every year as machinery is made available and whether the U.K. will find a way to enable India to secure conversion of such sterling into foreign currency. Millions of our dollars are lying frozen in British currency."

Referring to the reported plans of Mr. N. R. Sarker, Member of India's industrial mission to the U.K. and U.S.A., to establish 20 cotton spinning mills in Bengal, Mr. Nanavati sounded a timely note of warning against what he considers a craze for " provincial self-sufficiency."

The meeting terminated with a vote of thanks to the chair.

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Through Lancashire Eyes

Indian Textile Industry As They See It

Readers of the Indian Textile Journal *are by now familiar with the name of Mr. John H. Strong, F.T.I., F.R.S.A., who was for long one of our valued contributors. After serving with the Delhi Cloth and General Mills, he has now returned to England and joined the* Textile Mercury and Argus *as its Technical Editor. He recently addressed the British Association of Textile Works' Managers at the Textile Institute on the subject of "Textiles in India." The lecture was published in the* Textile Mercury and Argus, *November 10, 1944, and is now being reproduced, with due acknowledgments to them, in view of its special interest for Indian readers.*

IT will be agreed by all who have had the opportunity of studying cotton textiles in India, that there is no comparison between the systems usually employed in Lancashire and the systems in vogue in India.

In the first place their market is, up to the present, practically on the doorstep of the mill, and provided no textiles are sent into India, the power mills and the handlooms combined cannot yet supply their home market, but in my opinion it won't be many years before India will be not only supplying all her home needs, but exporting big quantities of cotton goods to other parts of the world. Many of the cotton textile firms are planning to build more mills as soon as machinery is available.

Salesman's Work

An interesting point in regard to the Indian mills is that a salesman is not considered as in so high a position as the inside manager, the actual producer, and this is easily explained, for costing clerks work out the actual cost (and do it department by department very thoroughly, not on the two-weaving basis), the price is fixed by the Managing Agents, so as the market is at home, so to speak, the actual work of the salesman is very small.

Bombay, Cawnpore, Ahmedabad, etc., generally use cotton bought in the bale, but many mills situated near the cotton fields buy their cotton either direct or through an agent straight from the cotton grower. (One of the most interesting sights I have ever seen was seeing old men and women, young men and women, and boys and girls coming from the beautiful looking cotton fields when picking is taking place, with their day's picking in a piece of hessian and all tramping along the canal bank to the farm compound to have it weighed and receive their pay.)

Most mills in India are complete vertical combinations working two or three shifts, performing every operation themselves, spinning, weaving, dyeing loose and fast colours in raw cotton, yarns or cloths, bleaching, mercerising, finishing in various ways, and making up ready for the market. In some cases, the goods are wrapped in cellophane paper ready for the market or retail bazaars. Not many mills have printing machines, but a few have, and after the war that side of the industry will not be forgotten. In every mill I saw in India, the machinery was in good condition, and while many thousands of second-hand looms and preparation machinery are being used on the weaving side, I saw very little second-hand machinery in the spinning departments. I saw many high-draft preparations, but I saw mules at only one mill, although I visited many, and the firm still using some mules make a speciality of terry towels, and use mule yarn for the pile, thus by using a really good cotton and little twist, they get a resultant towel which is really good.

Regular Overhauling

Regarding almost all the mills, it is usual to have a regular overhauling staff, always on the job, so actually machinery is kept in first-class condition.

The firm with which I was engaged used four types of Indian cotton: Desi quality—½ in. staple for up to 9s warp and 13s weft; four F quality—¾ in. staple for 14s warp and 20s weft; L.S.S. quality—⅞ in. to 1 in. staple for 20/22 warp and 24/26 weft, and 289 quality—1⅛ in. staple for 30/32 warp and up to 40s weft. We did get and use 40s warp from 289 quality by combing it.

We also used Egyptian cotton for up to 80s warp and 100 weft, both combed.

We used both the roller and the saw gins and baled ourselves, and in my experience the saw gin gave the better results as regards production, and cleaner ginned cotton, but left more short fibre attached to the seed. Often so much that a special separator was used to take away from the seed the short fibres left on after ginning, for the hairy seed was unsaleable for cattle foods, etc.

We came up against a problem it is more than doubtful if any of you have even thought of. It was just as cotton picking was beginning about January, and we were a little short of old cotton, so we used some new crop straight from the gin which had never been baled. It spun reasonably well, but was most unsatisfactory in winding. We found cotton from the same field all right after baling. We came to the conclusion that pressure flattened the hairs and enabled them to grip better. We may have been wrong in so thinking; however, it was a new problem to us.

Willing to Learn

I found the average Indian, Hindu or Mahomedan, willing to learn and, generally speaking, they tried to give satisfaction. In fact, the last few years have, in my opinion, shown a very big improvement in the quality of both yarns and fabrics. I was in Northern India and the only women workers we had were a few reelers. In Southern India many women work in the mills.

Usually the weavers worked one or two looms and on automatics four looms, but the tendency, especially on the automatic looms (all Japanese, both pirn changing and shuttle changing) was to go on more looms and a few weavers were trying eight looms when I came away. We had very little trouble with our automatic looms.

We did our own doubling, including the making of fancy yarns, and we could make any fancy yarn that can be made in Lancashire. We mixed grey and dyed cottons to give mock grandrelle, we doubled cotton and viscose rayon to make fancy threads and we mixed grey and dyed slivers.

We had tappet looms, top roller motions, dobbies up to 40 jacks, and jacquards up to 1,200 hooks. We had drop boxes, pick and pick looms and terry towel looms. Wire healds gave us better results, and were cheaper in the long run than cotton healds.

We had our own waste plant, and it is almost true to say that actually we had very little waste.

One big advantage of a vertical combination apart from big savings in transport is that any cotton or yarn of a faulty nature could always be worked through with special care. For instance, faulty yarn, which in many Lancashire mills would have to be "jobbed off," could be kept separate and worked in winding bit by bit with practically no loss.

We dyed cotton, hanks, cheeses and beams, and as you will know faulty wound cheeses or beams can give much trouble in dyeing, showing streaks, but we could always mix in gradually without any loss.

In every department we had overhauling staffs of competent workmen whose normal work was overhauling of machines, so that we never allowed our machines, spinning, dyeing, weaving or finishing, to be much out of order. In this connection I may say that I found that by painting the framework of a loom, winding frame or any other machine green when the machine was overhauled, with any dangerous parts red, we reduced accidents, and the worker took a pride in keeping the machine clean. We were doing that for four years.

We had oilers, sweepers, cleaners, leather repairers, sley makers, shuttle repairers, etc., but weavers carried their cloth to the warehouse before or after the change of shift. We stamped cloth at the looms every shift change, so that we could tell which shift the cloth had been woven in.

We were far more up-to-date as regards high-speed winding and warping than the average Lancashire mill, and also as regards repirning of weft. We used Universal, Sweiter and Shafhorst high-speed machines.

Regarding wages, the usual system in the spinning departments was to pay by the hour, but in winding, warping and weaving piece rates were paid. In the spinning departments the average was about £2 10*s*. 0*d*. to £3 0*s*. 0*d*. per month, working an average of 26 days to the month (no Sunday stop as a rule), winding is about the same, sizers about £4 10*s*. 0*d*. and weavers about 1*s*. 3*d*. per day per 9 hours per loom. Usually two loom-weavers. Of course, during the war, when very big profits have been made, dear food allowances and bonuses have been, and are being paid.

I have here for your inspection examples of some of the fabrics we made, and while you may not think any one of them to be very remarkable, I must point out that they have been made, in every case, from raw cotton to finished fabric, at one and the same mill, and under the vertical combination system. Apart from lappets and swivels, I can safely say we made almost every type of fabric, and we even made a swivel loom to weave tapes for tent stitching.

We had no gassing and no printing, but we made hard spun 50s warp and weft for mock voiles.

I went through a mill in Bombay in March this year 1944, with about 300 looms, and all on rayon or pure silk. Mostly pure silk. They were winding from hanks, preparing and weaving and making really beautiful fabrics. They had women winders and warpers.

Without doubt Indian textile firms are laying themselves out to attack outside markets after the war, and will not hesitate to scrap their present machinery and install the very best.

Welfare work in Indian mills is much greater than in Lancashire mills, where often none at all. We provided a first-class swimming pool, theatre, hockey teams, football, cricket and a decent library, where daily papers could be read.

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Commercial and Technical Organizations

(Concluded from page 757)

Marwari Chamber of Commerce, Calcutta

Cancellation of Quotas.—Referring to the Press Note issued by the Civil Supplies Department delivering a warning to the cloth dealers and threatening cancellation of quotas, the Committee of the Marwari Chamber of Commerce, in course of a Press *communique*, states that the allegation that the quota-holders are not following the directions of the Department resulting in the congestion of goods in the railway sheds is not true. On the other hand, the Committee understand that there are several instances of the handling agents not taking any delivery from the railway sheds for a month or so, and complaints have been received that besides cases of theft and substitution of goods, the handling agents, on account of their inadequate and inefficient machinery, have not been able to cope with the work of taking delivery from the railway sheds.

The Committee have further pointed out that despatch from the producing centres to Bengal is under the direct and complete control of the Government and as such dealers cannot be held responsible for the delay in import of quota goods as they have no hand in the matter as also because a major portion of the goods are imported by the Government nominees. The Committee also understand that the handling agents have not removed several hundreds of bales of cloth produced in the local mills from the godowns of the dealers for a pretty long time in spite of repeated reminders and a large number of godowns have not yet been unsealed though more than two months have passed. In the opinion of the Committee, the quota to quota system failed not because of "non-co-operation of the trade," as has been alleged, but because the Government were not earnest in making it a success inasmuch as absurd and impractical conditions were incorporated in the scheme as also the Government nominated Quota Tribunal formed under the scheme had not a single sitting.

TRADE LETTERS

(From Our Special Correspondents)

Ahmedabad

MOST of the Ahmedabad mill agents have started manufacturing predominantly grey utility cloth whose prices have been fixed by Government 5 per cent. higher than those of bleached cloth. They have already been dumping in the market printed goods of inferior quality as printing charges have been fixed much higher by Government than the actual printing cost. Quota-holders who get such inferior cloth are apprehensive of retaining the markets any longer as imports of foreign cloth of superior variety have started and are likely to increase shortly. They urge mill agents not to lower the quality of their cloth in order to get artificial higher price which they will not always get. During the last war they put on the market heavily sized cloth which sullied their reputation throughout the country. They should not again lose their reputation now by manufacturing grey and printed cloth which fetch them more money. It is always difficult to regain lost reputation.

Why No Large Orders for Machinery?

Ahmedabad mill agents are very cautious and conservative. They hesitate to place orders for new machinery for they fear they might receive only rebuilt old machinery. They are prepared to wait for five years, if necessary, for up-to-date new machinery which they think will enable them to face any foreign competition after the war. New mills which were started after the last war with new up-to-date machinery successfully competed with Lancashire and Manchester mills. They could not compete with Japanese mills whose cost of production was very low. But Japanese mills are out of the picture, and it is a question whether they will be allowed to work as before. Ahmedabad mill agents who have reaped a rich harvest during the war are confident about the future. With Japan out of the field, they can once again beat England if she is the only competitor. America is entering the field. But she is a new competitor whose strength is yet to be measured. If American competition is as formidable as the pre-war Japanese competition it cannot be overcome without good machinery whose manufacture Ahmedabad mill agents know will take time. They will place orders for new machinery only after they are sure of obtaining it.

Issues before the Industrial Court

The Labour Association has won one battle against the Millowners' Association. The Industrial Court has ordered the continuance of dearness allowance for three months after the end of the European war. The Millowners' Association had stopped paying it with the end of the European war. The Labour Association is still fighting with the Millowners' Association on other issues which will come up before the Industrial Court for decision one by one. The bonus question which was referred to the Industrial Court has been taken to the High Court on appeal by a mill on behalf of all the mills, contending that bonus is not a matter of industrial dispute. There are other issues still waiting to be taken to the Industrial Court, of which the question of compensation for stoppages due to coal shortage is getting acute. Mills are stopping more frequently due to coal shortage, and the operatives who are losing wages are getting restless. The Labour Association, which has already taken this question to the Conciliator, is pressing the Government of India to clarify its recent recommendations in this behalf. The Millowners' Association is not likely to accept more recommendations of the Government of India unless they are issued in the form of an Ordinance. This question, too, will have ultimately to be taken to the Industrial Court.

No less pressing is the question of continuing dearness allowance during the continuance of the high cost of living, without which workers will not remain in Ahmedabad mills. They had started leaving Ahmedabad as soon as dearness allowance was stopped, and they will do the same again if dearness allowance is stopped after three months from the end of the European war. If every question is to be decided by the Industrial Court, there will be inordinate delay and constant bickering between capital and labour which will jeopardize industrial peace.

Indore

WITH the introduction of the Textile Industry (Control of Production) Order, 1945, a new chapter begins in the history of the control of the textile industry under the Defence of India Rules. The mills here are now making preparations to start working under the new scheme. Even in the brief period during which this Order has been brought into force, several changes in the interpretation of the Order have been made causing perplexity to those concerned. Final proposals seem now to have been made by the mills, though it appears still a matter of consideration as to how far the 10 per cent. increase in production will be attained.

From 1st July also comes in force the introduction of the schedule of working out new ceiling prices of cloth. This schedule evidently seems to favour more production of grey cloth so far as the mills on this side are concerned.

This schedule, along with the scheme adopted to obtain increase in production, raises new problems for those interested in the textile industry. The new scheme, particularly the part enforcing use of less picks in the constitution of the cloth, will definitely affect the usual standard qualities that used to be manufactured by the mills. This means that the mills will not only lose their standard qualities but also lose their markets established in different parts of India and abroad with great effort. It is, therefore, time to pause and think seriously as to where the controls, very often introducing new methods, will lead us.

The growing scarcity of cloth for the consumers is becoming another serious problem. Every one seems to be raising the point why with such scarcity cloth is being allowed to be exported. The methods of distribution of cloth at the same time have not yet been evolved satisfactorily. While some sections of the community, the official class and some others, are enabled to obtain their requirements in preference to others, a great majority of the people are facing shortage. All these matters require serious consideration on the part of those who are handling the situation. Here in the local market also while on the one hand cloth is accumulating in the godowns of quota holders, suitable channels for distribution are not yet properly fixed. The problem of distribution, particularly of cloth, was always thought to be and would ever remain a very difficult and intricate one indeed.

Ujjain Strike

It is reported that the workers of the Ujjain mills who were on strike owing to the dispute regarding bonus have resumed working as the whole question has been referred to arbitration for final decision.

General Working of the Mills

The mills in Central India and Rajputana worked smoothly during the month. Coal supplies were maintained but the quality of coal being received in the mills is reported to be far from satisfactory. The stock position of coal has also not improved. It is essential that a reasonable stock should be built up with individual mills to ensure smooth working and to provide for unforeseen contingencies.

Cawnpore

Development Board

THE scheme for the setting up of a Development Board for improving the city of Cawnpore, its sanitation, health, housing, etc., and for fostering the trade and commerce, which the Provincial Government have sponsored, is now almost complete. The District Magistrate, Mr. Stephenson, and Sir Edward Souter, Officer on Special Duty and Chairman of the proposed Board, have now submitted the scheme in the form of a Bill, which after discussion with H.E. the Governor, will be enforced in the very near future. It is understood that the Board will begin functioning from 1st August 1945. Mr. A. D. Pandit, I.C.S., Secretary, Civil Supplies Department, has been appointed Secretary of the Board and is joining his new duties as from 1st proximo.

Industrial Museum

Several leading industrialists of Cawnpore have moved the idea of organizing an industrial museum in Cawnpore for the display of the articles manufactured by the city mills and factories (including cottage and medium-sized institutions) for telling the world its manufacturing capacity. There will also be an Information Bureau attached to it.

Cloth Rationing

Arrangements are now complete for the rationing of cloth in Cawnpore. From 15th July 1945 clothing could be had in Cawnpore only on the surrender of cloth coupons. Food ration card holders (among civilian population) will get the cloth coupons at the grain ration shops on the presentation of their ration cards. They will get one coupon for every unit up to a limit of four coupons when they purchase grain. A ration card holder will be able to purchase up to 5 yards of cloth per coupon (i.e., per unit on his ration card) up to a limit of 20 yards.

For the supply of cloth in rural areas, 56 retail cloth shops in different centres have been selected in consultation with the sub-divisional officers and tahsildars for distribution of cloth to rural population. In addition, separate arrangement has been made for the sale of shrouds. Every retailer has been directed to sell either one *dhoti* or one piece of cloth of 5 yards to a consumer at one time after taking the signatures of the buyers on the counterfoils of cash memos. Strict supervision over these sales has been maintained and the inspecting staff has been visiting these shops from time to time. Some standard cloth has also been provided at these shops in addition to the zonal cloth to meet the requirements of the rural areas.

Cloth Conference

The position of clothing in the Province became so very acute that the Governor himself had to intervene and concert measures for easing the position. A conference was convened at Government House and was attended, among others, by Sir Akbar Hydari, Secretary, Industries and Civil Supplies Department, Government of India, Mr. J. B. Greaves, two panel members of the U.P., namely, Sir Padampat Singhania and Mr. J. Tinker, and U.P. Government officials. The Conference, after prolonged discussions, agreed that special efforts should immediately be made to rush to the United Provinces arrears of cloth already purchased on U.P. account but awaiting transport from producing centres which may amount to 15,000 bales. The conference also agreed that the whole question of correctness of ten yards quota for U.P. should be discussed at the conference of all Provinces with the Textile Commissioner as the Province (U.P.) alone could not be dealt with separately. The conference arrived at an agreement on the methods to be followed regarding the supplies to military personnel and institutions and on the necessity for equal supplies to all without any special consideration of privileged individuals or classes.

Consumer Goods

The Government of the U.P. have chalked out an elaborate plan for the distribution of consumer goods. Nine hundred dealers have been selected from the premier towns of the U.P. who will receive the goods and sell them to the consumers in their districts. The list of goods includes fountain pens, cycles, toilet articles, etc. Arrangements will also be made to secure licenses for importing goods directly in case some dealers wish to do so. Inquiries in proper quarters show that the Province received sufficient quantities of goods during June. To relieve the shortage of articles like fans, tennis balls, cycle parts, etc., vigorous efforts are being made by the authorities to procure them from other parts of the country.

During last month 298 cases under the Cotton Cloth and Yarn Control Order were decided in 42 districts of the Province. In Basti, two dealers were sentenced to six months imprisonment and a fine of Rs. 500 for selling cloth above the controlled rate. In another case for the non-exhibition of price list in a cloth shop, a fine of Rs. 1,000 was imposed on the owner.

Post-war Schemes of U.P.

The Central Government's Memorandum to Provincial Governments on future industrial policy is understood to have been discussed at length at an important conference held at Naini Tal. The conference was convened and presided over by the Governor and was attended by the four Advisers to the Governor, the Chief Secretary, the Industries Secretary and Commissioner of War Production, the Finance Secretary, the Agriculture Secretary and the Economic Adviser to the Government. The Central Government, it is understood, is in correspondence with the local Government regarding the latter's post-war plans (details already explained in these columns). A closer collaboration is envisaged between the Centre and the Provincial Governments with a view to ensuring a smooth sailing for the proposed schemes.

Cost of Living Index

The working class cost of living index number for the month of June 1945 is 302; the subsidiary index figure based on prices at which certain articles are sold at mill shops is 263. The corresponding figures for the same month last year were 315 and 279 respectively; as against the previous month, the general figure has risen by 8 points and the subsidiary figure by 1 point.

South India

Artificial Silk Factory Near Alwaye

TRAVANCORE under the guidance of Sir C. P. Ramaswami Iyer is making rapid headway in the textile sphere. An artificial silk factory, with a capital of Rs. 1½ crores, is being started near Alwaye. The State Government are expected to take shares in the concern to the extent of Rs. 30 lakhs. The preliminary work on the erection of the factory will be started very shortly, and the machinery and other equipment for the factory are being ordered. When completed this factory will be the first of its kind in India.

Handloom Cloth Exports from Madras

It is understood that the maximum quantity of handloom cloth that will be allowed to be exported from the Madras Province has been fixed at about 6 million yards of cloth.

Industrial Adviser

The Madras Government have appointed Mr. V. Ramakrishna, a senior I.C.S. officer, as the Industrial Adviser. One of the earliest duties of the new officer will be to study the industrial conditions in the province with particular reference to these and other new industries in the post-war period. The Industrial Adviser is also to undertake a tour of Great Britain and America to study the latest development after which he will submit a report on the industrial advancement of the Presidency.

Central Advisory Committee for Travancore

A Central Textile Advisory Committee, consisting of representatives of the two Houses of the Travancore Legislature, as well as representatives of the textile weaving and fishing interests (who are interested in yarn for the manufacture of fishing nets) has been constituted by the Travancore Government. The Textile Commissioner is the president and convener of the Committee, which will advise the Textile Commissioner on matters relating to textiles.

Mill Goods Arrive in Madras

Local market reports indicate that most of the allotment of 2,900 bales of mill-made cloth for the Madras Province have arrived. English fabrics have also arrived but the quantity is not more than a few bales.

Textile Position in Mysore

Replying to a question put by a member in the June session of the Mysore Legislative Council, Mr. E. V. Ganapati Aiyar, Civil Supplies Secretary to the Government, stated that the supplies of cloth were not unlimited in war-time, and hence the present scarcity. The reason for the scarcity of *dhotis* in Mysore was partly due to it, as well as to the present lower production by Indian mills. The quantity of cloth that was being imported into the State was about 1,200 bales of mill-made cloth under the All-India Zonal Distribution Scheme, and quite considerable quantities of handloom cloths were also being imported. Facilities were provided by Government for the continuance of the well-established trade channels, which had existed all these years, for getting and distributing mill-cloth. Standard cloth was also stocked and sold in the depots.

Replying to another question, the Additional Secretary to the Mysore Government said that 133 lakhs of rounds of silk cocoons had come to the market in Mysore from 15th June 1943 to the end of March 1945, and over Rs. 188 lakhs had been realized, barring supplies to the Government of India, by its auction, of which a sum of over Rs. 83 lakhs had been paid to the *charka* reelers of silk. The balance, after deducting the cost of administration, would be augmenting the Sericultural Industrial Development Fund, in three equal proportions.

Cloth Situation in Travancore

Giving the background and explaining the official policy and action proposed by the Travancore Government in respect of the subject-matter of adjournment motions which the members of the Sri Chitra State Council, Trivandrum, had tabled, the Dewan-President reiterated his earlier remarks that, on account of vigorous representations on the part of his Government and the Government of India, it is now expected that from June onwards about 1,200 bales of textiles per month would come into the State, which would relieve the distress to a great extent. Government have also been pressing on the Government of India the special needs to prevent starvation and unemployment among a large section of the population, and it is hoped that the representations would be fruitful.

Cloth Production in Mysore

The total production of cotton piecegoods in Mysore State during the month of December 1944 was 4,220,958 yards as against 4,342,357 yards in the previous month. The quantity of yarn spun in mills during December 1944 was 2,196,358 lbs. as against 2,397,897 lbs. in the previous month.

Indian Mill Finance

Working of Textile Companies

Lakhshmi Cotton Mfg. Co., Ltd.

(Agents : The Bombay Company Ltd., Bombay)

The working of the company for the year ending 31st December 1944 shows a profit of Rs. 48,87,889 which with the balance brought forward from the previous year of Rs. 4,20,059 gives a total of Rs. 53,07,948. The directors declared an interim dividend in October 1944 of Rs. 25 per ordinary share absorbing Rs. 1,60,000 and they have transferred to the credit of reserve fund Rs. 9,50,000 and have provided for depreciation on motor lorries Rs. 11,762 and reserve for taxation Rs. 35,20,000, leaving a sum available of Rs. 6,66,186.

Out of this they recommend a dividend of Rs. 12-8 per share less income-tax on 6,400 preference shares and a final dividend of Rs. 50 per ordinary share on 6,400 shares (making Rs. 75 per share for the year) absorbing Rs. 3,76,250, and to carry forward the balance of Rs. 2,89,936.

Coal supplies were uncertain throughout the year and in all seventeen days' working was lost through lack of coal.

Additions to buildings during the year cost Rs. 55,737 representing the completion of the chawls and to machinery Rs. 31,213. The profits and fixed charges of the company have been insured for Rs. 40,00,000 per annum for two years.

The buildings and machinery of the mill and stocks of cotton, cloth, yarn, stores, etc. at Sholapur and elsewhere have been insured under declaration policies for Rs. 3,27,82,000.

Mysore Spun Silk Mills, Ltd., Channapatna

(Managing Director:
Dewan Bahadur K. R. Srinivasiengar, B.A.)

The combined working of the Mysore Spun Silk Mills and its filature section for the year ended 31st December 1944 resulted in a net profit of Rs. 6,44,968-8-3 as against Rs. 6,31,208-11-3 in the previous year, showing an increase of Rs. 13,759-13. Adding to this a sum of Rs. 8,036-2-9 which was carried forward from the previous year's profits, the total amounted to Rs. 6,53,004-11. Out of this a sum of Rs. 3,27,759 has to be set apart for payment of income-tax and super-tax which has been raised from four annas to six annas in the rupee under the recent Income-tax Amendment Act. This leaves a balance of Rs. 3,25,245-11. Of this, a sum of Rs. 50,000 having been already provided for payment of an *ad-interim* dividend at As. 8 per share for the half-year ending 30th June 1944, the Directors propose that the remaining sum of Rs. 2,75,245-11 be utilized as follows:—To credit to reserve fund, raising the total of the fund to Rs. 4 lakhs Rs. 1,00,000; to credit to dividend equalization fund, raising it to Rs. 1 lakh Rs. 50,000; to credit to reserve for fluctuation in the value of raw materials and for heavy replacements of plant and machinery, raising it to Rs. 1,25,000, Rs. 25,000; to payment of final dividend at As. 8 per share (10 per cent.) for the half-year ending 31st December 1944, Rs. 50,000; bonus at As. 8 per share Rs. 50,000 and to carry forward to next year Rs. 245-11.

The work connected with the installation of an additional 160 basins in the filature in accordance with the agreement with Government under the Silk Filature Expansion Scheme was nearly completed; and all the additional basins were erected and brought under operation before the end of the year.

Owing to the breakdown of the electric supply to the factory on account of the serious accident that occurred to the Power Station at Sivasamudram in May 1944, the factory had to close down operations completely for one month and to work with a reduced capacity for a further period of about three months till the power supply was fully restored by the Electric Department.

Vishnu Cotton Mill Ltd., Sholapur

(Agents: The Bombay Company Ltd., Bombay)

The working of the company for the year ending 31st December 1944 shows a profit of Rs. 52,50,626 which with the balance brought forward from the previous year of Rs. 1,40,149 gives a total of Rs. 53,90,775. The Directors declared an interim dividend in October 1944 of Rs. 8 per ordinary share absorbing Rs. 1,28,000 and they have transferred to the credit of reserve fund Rs. 9,25,000 and have provided depreciation on motor lorries Rs. 11,463 and reserve for taxation Rs. 39,25,000 leaving a sum available of Rs. 4,01,312.

Out of this they recommend a dividend of Rs. 35 per share less income-tax on 1,600 preference shares and a final dividend of Rs. 18 per ordinary share on 16,000 shares (making Rs. 26 per share for the year) absorbing Rs. 3,27,375 and to carry forward the balance of Rs. 73,937.

Coal supplies were uncertain throughout the year and in all seventeen days' working were lost through lack of coal.

Additions to buildings during the year cost Rs. 41,366 and to machinery Rs. 63,343. The main item was the erection of a water softening plant.

The profits and fixed charges of the company have been insured for Rs. 40,00,000 per annum for two years.

The buildings and machinery of the mill and stocks of cotton, cloth, yarn, stores, etc., at Sholapur and elsewhere have been insured under declaration policies for Rs. 2,68,78,200.

Gold Mohur Mills, Ltd., Bombay

(Agents : James Finlay & Co., Ltd.)

The Directors' report of the company for the year ended 31st December 1944 shows a trading profit for the year of Rs. 64,56,765 from which have been deducted provision for income tax, corporation tax and excesss profits tax of Rs. 48,57,000, and reserve fund (estimated compulsory E.P.T. deposit) of Rs. 11,58,000.

Adding to the balance the amount carried forward from previous year Rs. 59,700 there is a total of Rs. 501,465 for disposal. From this it is proposed to pay a dividend of Rs. 20 per share on 25,000 shares (free of tax) which will absorb Rs. 5,00,000, leaving the balance to be carried forward of Rs. 1,465.

The whole of the company's property has been insured against fire for Rs. 1,60,18,000 and the profits and standing charges have been insured for Rs. 1,74,00,000, covering indemnity for 36 months. The property is also covered against riots and civil commotions fire risks. Stocks have been covered by Government war risks insurance, also buildings and machinery.

Indian Bleaching, Dyeing and Printing Works, Ltd., Bombay

(Agents: Mafatlal Gagalbhai and Sons)

The working of the company for the year ended 31st December 1944 shows a profit of Rs. 8,00,208-13-3 (after paying Rs. 88,912-1-9 as the Managing Agents' commission).

Considering the frequent changes in the provisions of the Cotton Cloth and Yarn (Control) Order and the reductions in prices, etc., put into force from time to time, during the year under report, the Directors trust the result will be found satisfactory. During the year under review, the factory worked according to requirements by day and night shifts.

The Directors recommend that a dividend of Rs. 6 per share (free of income-tax) be paid and Rs. 72,000 be utilized for the purpose. They further recommend the following allocations out of the profits of Rs. 7,80,208-13-3, after providing Rs. 20,000 for depreciation:—Profits after providing depreciation Rs. 7,80,208-13-3, *less* E.P.T. and I.T. taxation provisions Rs. 6,15,000 and payment of a dividend at Rs. 6 per share free of income-tax Rs. 72,000, to be taken to the reserve fund account Rs. 93,208-13-3.

Cloth selling commission of Rs. 12,843-8-3 was paid to the New China Mills Ltd.

The mill buildings, machineries, together with stocks of dyestuffs, chemicals, stores, cloth yarn, etc., including those in process, are insured for Rs. 62,30,000 against fire, riot and civil commotion risks. The profits and fixed charges also stand insured for Rs. 4,00,000 for two years. The buildings and machineries and stocks (partially) are also insured for Rs. 22,01,100 against war risks.

Minerva Mills, Ltd., Bangalore

(Agents: N. Sirur & Co., Ltd., Bombay)

The company's operations for the year ended 31st December 1944 show a profit of Rs. 10,26,955-1-8, which with Rs. 46,756-6-2 brought forward from the previous year's account makes a total of Rs. 10,73,711-7-10. From this sum the Directors have allocated to provision for taxation Rs. 5,00,000; depreciation on buildings and machinery Rs. 1,80,000 and labour colony fund Rs. 50,000, leaving a balance of Rs. 3,43,711-7-10 which they propose to dispose of same as under:—Dividend of Rs. 6 per share and a bonus of Rs. 6 per share on 25,000 shares of Rs. 100 each Rs. 3,00,000; bonus to company's staff at Bangalore Rs. 18,000; and to carry to next year's account Rs. 25,711-7-10.

The successive reductions in prices of yarn and cloth following the control measures adopted by the Central Government resulted in lower margins of profits than in previous years as was the case in almost all the textile mills. The other factor which was largely responsible for the fall in profits was the entire stoppage of the mills for nearly two months consequent upon the breakdown of the power generating plant at Shivasamudram on the 19th May 1944.

The mill property and stocks are insured for the sum of Rs. 76,38,190 and the profits and standing charges for Rs. 40 lakhs for 24 months' benefit, that is Rs. 20,00,000 annually. In addition, the company's buildings, machinery, stock and stores have been insured against war risks as required by the Government of India Ordinances and the War Risks Insurance Emergency Act of the Government of Mysore.

Podar Mills, Ltd., Bombay

(Agents: Podar Sons Ltd.)

The profits for the year ended 30th September 1944 (after providing for the Managing Agents' commission) together with Rs. 18,521-8-6 brought forward from last year amount to Rs. 63,87,080-8-7 which the Directors propose to dispose of as under:—Provision for taxes Rs. 52,00,000; depreciation fund Rs. 1,00,000; reserve fund Rs. 8,00,000; dividend on preference shares at Rs. 4 per share free of income-tax Rs. 34,000; dividend on ordinary shares at Rs. 10 per share free of income-tax Rs. 2,00,000, and balance to be carried forward Rs. 53,080-8-7.

It will be remembered that the Directors had also during the year capitalized a sum of Rs. 3,00,000 from the amount standing to the credit of the reserve fund as on 28th April 1944 and issued 4 per cent. cumulative preference shares free of income-tax of the same amount to the holders of ordinary shares free of any charge.

The whole of the company's property has been insured as at 30th September 1944 through the agency of Messrs. Podar Sons Ltd., Chief Agents of Indian Mercantile Insurance Co., Ltd., Queensland Insurance Company Ltd., and Royal Insurance Company, Ltd., against fire for Rs. 45,76,587 and the profits and standing charges, etc., have been insured for Rs. 80,00,000. The properties are also covered against all riot and civil commotion risk. Further, the whole of the property is fully insured under the War Risk (Factories and Goods) Insurance Ordinances 1942.

NEWS OF THE MONTH

Indian

Kandan Textiles Ltd., Madras: New Address.—The new address of the Kandan Textiles Ltd. is 8, Second Line Beach, Post Box No. 99, Madras.

Karachi Cotton Fire.—Damage to the extent of Rs. 1,30,000 is reported to have been caused by a fire which gutted some cotton bales in Karachi on 3rd July 1945. Two fire engines of the Karachi Port Trust fought the flames for nearly three hours.

New Registration.—*Premier Textile Mills Ltd.*—Director: G. D. Kothari, cotton spinners and doublers, flax, hemp and jute spinners, etc. Public company. Authorized capital—Rs. 2,00,00,000. Registered office—8, Royal Exchange Place, Calcutta.

Export Trade Control Notification.—A notification issued by the Export Trade Controller, Karachi, says that, until further orders, the export of raw cotton, of $\frac{3}{4}''$ staple length and above, will be allowed without quantitative restrictions to the permissible destinations.

Cost of Living Index Number for May 1945.—During May, the working class cost of living index number for Bombay, with the average prices for the year ended June 1934 equal to 100, was 230. This was four points higher than in the preceding month. The index number for food articles advanced by eight points to 263.

Sole Agents in India for Joseph Stubbs Ltd., Manchester.—Messrs. Ormerods (India) Ltd., Bank of Baroda Building, Apollo Street, Fort, Bombay, have been appointed as sole agents for India for Joseph Stubbs Ltd., Manchester, manufacturers of winding, doubling, gassing, polishing, reeling and bundling machines for all types of yarns and threads.

Artificial Silk Factory For Travancore.—An artificial silk factory with a capital of Rs. 1½ crores is being started near Alwaye. The Government is expected to take shares in the concern to the tune of Rs. 30 lakhs. The preliminary work on the erection of the factory will be started very shortly, and the machinery and other equipment for the factory are being ordered.

Textile Calendar

JULY

3rd, Tuesday :

Cotton Committee of the Textile Control Board meets in Bombay.

10th, Tuesday :

First Quarterly General Meeting of the Indian Chamber of Commerce, Calcutta.

11th, Wednesday :

Opening Ceremony of the Raghuvanshi Mills Ltd. (Reconstructed) by Mr. J. B. Greaves, C.B.E., Sheriff of Bombay.

Mr. K. M. D. Thackersey, Chairman of the Textile Control Board, addresses Press Conference on the working of the Utility Cloth Scheme.

17th, Tuesday to 21st Saturday :

Meetings of the Textile Control Board and its Sub-Committees in Bombay.

18th, Wednesday :

Quarterly General Meeting of the Indian Exporters' Association, Bombay.

First Annual General Meeting of the V.J.T.I. Old Boys' Association, Victoria Jubilee Technical Institute, Matunga, Bombay.

19th, Thursday :

Bombay Presidency Muslim Chamber of Commerce meets Sir Akbar Hydari.

23rd Monday to 27th Friday :

Meetings of the Indian Central Cotton Committee and its Sub-Committees in Bombay.

Cawnpore Coal Case : Accused Acquitted on Appeal.—Mr. Justice Waliullah of the Allahabad High Court delivered judgment on the 29th June last in the Padampat Singhania Coal Case, allowing the appeal and acquitting both Sir Padampat Singhania, Managing Director of the Cotton Mills, and Nandan P. D. Sakseria, Store Purchase Officer. Any fines or part of them, if already realized, have been ordered to be refunded.

It may be recalled that the appellants had been convicted under sections 116, 117 and 122 of the Defence of India Rules and sentenced to pay fines of Rs. 10,000 and Rs. 1,000 respectively by the Sessions Judge, Cawnpore, for giving false and incorrect returns of the coal in their stock.

Institute of Textile Technology, Trivandrum: List of Successful Candidates.—The following is the list of successful candidates at the diploma examinations in textile manufacture and textile chemistry and certificate examinations in textile manufacture and textile chemistry held in March 1945.

Diploma Examination in Textile Manufacture.—Varughese Thomas, K.*, Zacharia, C. P., Veerakumaran, P., and Srinivasa Ayyar, S.

Diploma Examination in Textile Chemistry.—Harihara Ayyar, G.*, Sundaram, K. R., Krishnamoorthy, H., Chacko, K. C., Philipese Mathai, M., and Sundaram, S.

Certificate Examination in Textile Manufacture.—Second Class.—Jesudas, J., Ganesan, N., Masud, A., Damodaran Nayar, C. K., and Kumaran Nayar, C. V.

Certificate Examination in Textile Chemistry.—First Class.—Thomas, K. T., and Sankarasubramonia Ayyar, P.

Second Class.—Kesavan Potti, V., Gopalakrishna Kurup, K., and Ganesa Ayyar, K.

Rayon Industry for India : Bombay Discussion.—The possibility of establishing the rayon industry in India was discussed from the technical and economic points of view by the Rayon Panel, appointed by the Department of Planning and Development, Government of India, at its meeting held in Bombay last month. The meeting was presided over by Dr. Nazir Ahmad, Director of the Technological Laboratory of the Indian Central Cotton Committee, and attended by Sir Shantidas Askuran, Mr. P. N. Sinha and Mr. M. Subbarao. Sir Frederick Stones and Mr. Dhirajlal Shroff were also present by invitation. The Committee directed its Secretary, Mr. A. S. Bhatnagar, to collect information regarding the supply of raw materials, chemicals and other essentials. The next meeting of the panel is expected to be held in Bombay in August 1945.

Cotton Committee : Revision of Floor Prices Considered.—A meeting of the Cotton Committee of the Textile Control Board was held in Bombay recently to consider the question of futures trading in the next cotton crop and the fixation of maximum and minimum prices for Indian cotton during the next cotton year. The meeting was adjourned without taking any decision.

It is gathered that the Committee had before it two proposals in respect of the fixation of the floors and the ceilings for the various varieties of Indian cotton. The official proposal emanating from the Government of India favoured the lowering of the floor by Rs. 50 to Rs. 300 per candy in terms of the Indian cotton contract and the corresponding reduction in the minimum prices for other bases. On the other hand, some of the members of the Committee led by Sir Chunilal B. Mehta, Vice-President of the Indian Central Cotton Committee, stressed the need for raising the present floor by Rs. 50 to Rs. 400.

Parsi Trusts : Move to Start Cottage Industries.—A suggestion to appoint a small but influential committee of Parsi industrialists to advise Parsi charity trusts on the question of starting cottage industries with a view to absorbing those Parsis who are likely to be thrown out of employment after the war as well as others, was made at a conference of representatives of the trusts held at the Parsi Punchayet Office, Bombay. It was convened by the trustees of the Punchayet and was presided over by its Chairman, Sir Shapoorji Billimoria.

Referring to the proposed organization of charities, Sir Shapoorji said that, if the trusts came together in a common charity pool, it would be possible to devise means by which charities could be properly administered. He pointed out that, in spite of munificent donations, poverty not only persisted in the community but was increasing year by year. Some 40 per cent. of the Bombay Parsis, nearly 25,000 persons, had at one time or another been in want despite these charities. About 5,000 Parsis were in abject poverty and dependent on doles.

Some Bombay Social Functions.—Mr. B. B. Joshi, L.T.M. (Hons.), who recently relinquished his post of Additional Controller, Raw Materials and Stores, Office of the Textile Commissioner, Bombay, gave a dinner party to his friends and admirers at the Radio Club, Bombay, on 27th June 1945 at 9 p.m. Another party was given by Mr. Sohrab K. Khan to his friends at the Taj Mahal Hotel, on the 29th June on his retirement from the post of Deputy Controller, Raw Materials and Stores, Office of the Textile Commissioner, Bombay. This was followed by a lunch party given by Mr. N. S. V. Aiyar, Secretary, Millowners' Association, Bombay, in honour of Mr. B. B. Joshi at the Taj Mahal Hotel at 1 p.m. on 30th June 1945.

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* Obtained distinction.

The same night at 8 p.m. Seth Maganlal Parbhudas of the Raghuvanshi Mills gave a banquet at the Taj Mahal Hotel in honour of his son Mr. Bipinchandra, who left for higher studies for America on 4th July. On Wednesday the 4th instant Mr. S. H. Bhagwati, B.Com., of the Associated Textile Engineers, gave a dinner party at the Radio Club, Bombay, at 9 p.m. to meet Mr. B. B. Joshi with members of his association. Mr. Joshi sailed for England on the 5th instant.

Engineering College at Coimbatore.—H.E. the Governor of Madras opened the Engineering College for which Mr. G. D. Naidu has given Rs. 2,00,000 and buildings free for the duration of the war at Coimbatore on 9th July 1945.

Dewan Bahadur C. S. Ratnasabapathi Mudaliar, Chairman of the Southern India Millowners' Association, on behalf of the Association, has offered another donation of Rs. 2,00,000 for opening a course in Textile Engineering in the new Engineering College.

The Engineering College opened at the National Electric Works belonging to Mr. G. D. Naidu will afford instruction in civil, electrical, automobile and textile engineering and the standard and the duration of the course will all be similar to those obtaining in the College of Engineering, Guindy. For the first year or two, the physical and chemical laboratories at the local Government Arts College will be made use of for practical instruction in Physics and Chemistry. The equipment in the P. S. G. Industrial Institute will also be utilized to the extent necessary for which the authorities of the Institute have been approached. About 80 to 100 students will be admitted and the students will be selected by the authorities of the Guindy College. Hostel arrangements for the students are nearing completion.

Fall in Cotton Acreage : All-India Forecast.—A fall of 28 per cent. in acreage and 31 per cent. in the output of Indian cotton is foreshadowed in the Fourth All-India Cotton Forecast. The acreage under cotton during the season 1944-45 is estimated at 14,744,000 acres, and the estimated yield is placed at 3,468,000 bales.

The forecast covers the entire area of India, and deals with both early and late crops of the season, excepting the very late crops in Madras, Bombay and Hyderabad. On the average of the last 10 years, the area reported in the Fourth Forecast has been 98.7 per cent. of the area reported in the final forecast, and the estimated yield 95.6 per cent.

The table below shows the present estimates of area and yield classified according to the recognized trade descriptions of cotton:—

Trade descriptions	*Area* (In acres)	*Yield* (In bales of 400 lbs. net).
Bengals ..	1,608,000	534,000
Americans ..	3,233,000	1,198,000
Oomras ..	3,496,000	554,000
Broach ..	520,000	129,000
Surti	323,000	64,000
Dholleras ..	820,000	139,000
Others ..	4,744,000	850,000
Total ..	14,744,000	3,468,000

Government Ending Silk Purchases : Fabrics for Open Market.—The silk expansion scheme initiated by the Government of India for acquiring the maximum quantity of raw silk for the manufacture of parachute silk will be wound up by the end of July 1945.

Under this scheme, a large number of new filatures were started in Mysore State and in other silk producing centres of India to reel raw silk to be supplied to producers of parachute fabric.

About 1,000 new basins for reeling silk were established in Mysore State. As part of this scheme, the cocoon market was controlled and the basis fixed for computing the cost of production per pound of silk manufactured in these filatures. The filature owners, who were also accommodated in the matter of their capital requirements, were allowed to earn a profit of 6¼ per cent. over the assessed cost of production. They were required to sell exclusively to the Government of India the product of their filatures.

As from August 1945, these filature owners will be allowed to sell their products in open markets and will be allowed to earn a profit of 10 per cent. over the assessed cost of production.

As a corollary to this measure, the Government are to control all silk fabrics in civilian markets in India.

Uptil now, only prices of cocoons and raw silk produced in filatures were controlled, with the result the Indian Government were able to purchase one pound of raw silk reeled in up-to-date filatures at about Rs. 30 per pound, while inferior *charka* silk was auctioned by the Government realizing prices ranging from Rs. 90 to Rs. 120 per pound.

Foreign

Palestine-Iraq Trade Pact.—The signing of a one-year trade pact between Palestine and Iraq was recently announced. Palestine will send Iraq textiles, earthernware, crockery and glassware and will import 14,000 head of cattle and supplies of wool and yarn.

Imperial Chemical Industries, Ltd. in a preliminary statement, report that, after providing for taxation and obsolescence, the net income for 1944 was £6,972,988, as compared with £6,685,345 for 1943. A final dividend of 5 per cent. makes 8 per cent. (same) for the year.

British Cotton Board Appeal to Allocation Holders.—The British Cotton Board has appealed to all allocation holders to offer free stocks of piecegoods for relief purposes. Approved lots will be purchased by authorities in England representing Europe and the Governments concerned.

No Immediate Benefit to British Textile Trade.—The British Cotton Board informed the Department of Overseas Trade in England that the British Industrial Fair next year would not benefit the cotton textile export trade. There was no immediate need to encourage export orders of British cotton goods in view of the world wide cotton shortage, the Board said.

Platt Bros. Report Bigger Profit.—The Directors of Platt Bros. and Co. (Holdings) Ltd. report a net balance on the profit and loss account for the year ended 31st March of £98,057 6*s.* 7*d.* against £97,372 18*s.* 6*d.* in the previous year. They recommend a final dividend of 3½ per cent. less tax on the preference stock, making 7 per cent. on the year, and a dividend of 10 per cent. less tax, on the ordinary stock.

Faster Maturing Seed Developed in Russia.—Three new types of early-maturing cottonseed are reported by the Soviet Press to have been developed in an experimental station in Tashkent, in the Soviet Union. They are said to reach maturity in 120 days, and it is thought that in the Ukraine 80 per cent. of the crop would ripen before the advent of freezing weather. Seeds are to be widely tested in Nikolayev and Odessa provinces.

Stepping up Textile Production in Australia.—There is every prospect of great expansion in the Australian cotton textile industry within five years. It is envisaged that, with the assistance of British firms, some £9,000,000 will be expended on land, plant and buildings and that production will be stepped-up to 100,000,000 lbs. of yarn and 92,000,000 yards of cloth per year. This would cover about 40 per cent. of Australia's requirements of cotton piecegoods.

Machinery for British Cotton Industry Assured.—Under a regulation recently issued, the British cotton industry will get its fair share of supplies of new cotton textile machinery now being manufactured.

Mr. Oliver Lyttelton, Minister of Commerce, gave the House of Commons this information on 12th June last in reply to what steps the Government was taking to help the Lancashire cotton industry re-equip itself for post-war trade.

Industrial Control of Germany: Measures Being Taken.—It is understood that steps are being taken in connection with the industrial control of Germany, according to an article in the *Financial News*. It is reported that leading British industrial organizations are sending a delegation to investigate the position of works and mills in Germany, and consultations relating to the cotton industry are taking place at the moment in Manchester under the auspices of the Cotton Board.

Reduced Wool Clip Expected.—Wool production in Australia in 1945-46 will probably be 800,000 bales smaller than the record 1943-44 clip of 3,770,000 bales. Decline in Australian wool production in two seasons has probably been the steepest in the history of the industry. Drought has reduced the sheep numbers and the cut of wool per sheep. On the present British buying price of 15.453*d.* a lb., it is estimated that Australian woolgrowers will lose £16,000,000 because of lowered production.

Higher Price for Piecegoods.—Effective from 11th June the prices of cotton yarn piecegoods have been raised 5 to 8 per cent. in order to provide for higher price margins for spinners to cover the increased wages of the operatives.

This increase in wages will cost the industry £3 million annually.

Despite this increase, Lancashire cotton goods remain cheap compared to world prices and traders foresee an expansion in the export trade at an early date.

U. S. Cotton Textile Output : Decrease Likely.—War Production Board officials in Washington estimate that the available supply of cotton textiles in the third quarter of 1945 to all claimants will be approximately 225,000,000 yards, representing a drop of 7½ per cent. from the second quarter, and this may even be cut further, unless efforts by the various Government agencies to step-up production are successful.

The military services have agreed to take a 15 per cent. cut in their requirements, making about 100,000,000 yards available for other purposes. About 1,000,000,000 yards will be assigned to civilian production.

Exports of cotton textiles are scheduled for a slight fall in allocations, and shipments to be handled through the Foreign Economic Administration call for 10,000,000 yards for Europe, 80/85,000,000 yards for Latin America, Africa and the Middle East, and large increases for the Far East, particularly China and the Netherlands East Indies.

Australian Clothing Mills Active.—During the war, Australian clothing mills used almost one-third more wool than in pre-war years. Latest trade figures show that 333,915 bales were used in 1939-40, compared with 447,622 in 1943-44. The average for the five years preceding the war was 326,915 bales, compared with the average for five war years of 421,714 bales. Peak year was 1941-42 at 470,515 bales, but the downward tendency since then has resulted from shortage of labour and not from diminished demand for goods. The figures illustrate the activity of the mills, which have been on Government orders, civilian needs and export requirements. Prior to 1939, practically the whole output was for civilian trade. War-time needs of Australian and Allied forces pushed civilian business into the background. Quality of civil fabrics was reduced by regulations and rationing, but there are trade hopes that the regulations may be lifted soon, thus enabling the mills to concentrate on improved cloths and probably increasing the local use of wool.

Better Wages for Cotton Operatives in England.—After hearing an application by the operatives in the spinning and manufacturing sections of the cotton trade for an increase of 11*s.* per week for adults and 5*s.* for juveniles, the Conciliation Committee has given an award of 7*s.* per week for adults and 4*s.* for juveniles.

This follows two previous awards, the last one in 1943, and brings the total flat rate increase to 16*s.* and 9*s.* respectively for a 48-hours week to operatives following the normal complement of machines.

Sir George Doughty, K.C., Chairman of the Conciliation Committee, said it was felt that this increase would make the industry more attractive to newcomers and also prove an incentive for ex-operatives to return. In the case of machinery, understaffed in the spinning section, the operatives on those machines would, as before, divide the absentees wages and also the present increases.

The increased wages are to be payable in the week commencing 11th June in respect of the previous week's work.

More Lancashire Mills Reopening.—A further 11 spinning mills in Lancashire are being reopened in areas where it is thought more skilled cotton labour will be available. This will make a total of 17 mills restarted out of about 180 which were closed down under the Government's concentration scheme for the cotton industry.

About one-third of the industry was stopped under this scheme. Restarting of more spinning mills is regarded as a forward step towards meeting big demands for cotton goods which are now coming to Britain from all parts of the world.

The 11 mills now reopening contain about 500,000 spindles and will require, when fully staffed, nearly 3,000 operatives. It is believed there is a good chance of staff returning as more British munitions works close.

Cleaning and preparation work is beginning immediately and yarn will be produced about 16th July. Larger production of yarn is expected to relieve the distinct shortage of supplies which has been experienced for many months according to Manchester industrial circles. Restarting of a large number of ring spindles should bring substantial increase in the total weight of yarn output, though most of the mills now reopening produce medium or fine counts.

Russian Research in Coloured Cotton.—Improvement in the technical qualities of the cotton fibre, together with an increase in gross output are two of the distinguishing features of cotton-growing development in the U.S.S.R. according to V. Kosov, a member of the People's Commissariat of Agriculture.

Much research is being carried on, especially in seed selection, in order to meet the demands of the industry for new and improved qualities in the raw material.

In 1936 the All-Union Cotton Research Institute began work on the development of woolly cotton and natural-coloured cotton. The results achieved have been exceedingly interesting. By inter-species crossing and also the crossing of different species, several kinds of cotton with coarse woolly fibres and others of a brown colour have been produced. These new cottons have a good yield, and their technical properties are excellent.

Within the next few years the world will be able to grow cotton in a wide range of natural hues and shades, so the results of experiments made by the Turkmenian Experimental Station of the Cotton Research Institute indicate. The station is growing cottons of the following shades: light and dark blue, green, pink and smoke-colour.

The brown woolly cottons now being grown in the Soviet Union are of particular commercial interest since they reduce the cost of manufacture by economizing in dying steam for processing the cloth, electric power and labour. The woolly cotton cloths are also more resistant to creasing than long-staple varieties.

Fifty Years Ago

(From the *Indian Textile Journal*, July 1895)

Dyestuff in an Indian Plant

Zoddalia aculeata is an Indian plant belonging to the Rutacea. Its root bark is used in Madras as a yellow dyestuff, and it also possesses valuable medicinal properties. The colouring matter has been ascertained by Perkin and Hummel to be berberine and from comparative dyeing tests the bark possesses the same power as a 3 per cent. solution of berberine hydrochloride.

About Ventilation

"Bombay millowners may realize that they have nothing to expect from Government in the way of help towards the effective ventilation of mills . . . English manufacturers had to be compelled by law to recognize facts connected with steaming in weaving sheds and ventilation, which they now recognize to be good and useful, but which they might have enjoyed years ago had they only been more enlightened. Indian manufacturers having an actual knowledge of the *best atmosphere* produced *naturally* in mills have now to be convinced that it can be produced artificially and with profit in order to ensure its general adoption."

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Founded by **SORABJI M. RUTNAGUR**

55 th Year

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EDITORIAL

The War Ends

BARELY three months after the conclusion of peace in Europe, hostilities in the Far East also have at last (on 15th August 1945) ended, thanks to Russia's entry and the atomic bomb. The outbreak of war with Japan affected India's economic life more closely than the earlier outbreak in Europe. Japan, before the war, was taking as much as 1½ million bales of India's short-staple cotton which it converted into textiles for the Australian market. It bought large quantities of Australian wool and converted them into woollen fabrics for the Indian market. Its rayon yarn and cloth exports as well as woollen and other textile exports to India formed a great proportion of the total trade between the two countries.

The declaration of hostilities between the two countries lost India its assured export market for 1½ million bales of short-staple cotton and Japan its Indian market for piecegoods and other consumer goods. As it happened, with Lancashire preoccupied with Britain's war requirements, the Indian cotton mill industry was called upon to supply practically the whole of the home market as well as take Japan's place as the supplier of cotton textiles to Australia, Africa and the Middle East. It was clear, however, that the new export markets had turned to India out of sheer necessity and that, if the Indian industry did not take special pains to improve the finish and packing of its products and give its customers overseas complete satisfaction in every possible way it would have to look to its laurels when peace returns. With the return of peace competitive conditions should be returning everywhere, and the advantages of the monopolistic position hitherto enjoyed by the Indian industry will have vanished. This has also been the gist of several reports from India's Trade Commissioners abroad on the post-war prospects of India's foreign trade. Although it may not be possible for Japan to invade the Indian market again overnight, it will surely be a matter of time before it makes itself a formidable competitor in the economic sphere as in the past. The end of the war in the Far East heralds the dawn of a new era. Whether that era is to be one of fierce international competition in the economic sphere, or one of negotiated adjustment and accommodation, is more than one can say at this stage.

Planned Research

PROPOSALS of far-reaching importance to the future of scientific and industrial research in India are contained in the report of the Industrial Research Planning Committee just published. The Committee, which was presided over by Sir R. K. Shanmukham Chetti, was asked to make a comprehensive survey of the existing facilities for scientific and industrial research in India and report on the measures necessary for their co-ordination and development. It finds that the facilities at present available stand no comparison at all with similar facilities abroad and that they are by no means commensurate with India's barest needs. Its recommendations include the setting up of a National Research Council of sixty which will immediately initiate a five-year research programme to be carried out by a smaller executive body called the Research Board. Of the sixty members of the Research Council, twenty will be scientists, fifteen representatives of chambers of commerce and employers' organizations, five representatives of trade union organizations, and twenty nominated by Government, not more than eight of them being official. The organization and maintenance of national laboratories and specialized research institutions, the stimulation of pure and applied research in the universities by the grant of fellowships and scholarships and the stimulation of research activities in industry will all come within the scope of the Research Council's work. So also will the co-ordination of the activities of the existing research institutions and departments of Government and the planning of research programmes on a comprehensive basis. The Research Council is, moreover, expected to constitute a national trust for patents and to establish a national board of standards and specifications. The actual administration of the Council's work will, however, be in the hands of the Research Board.

On the lines of the National Research Council at the Centre there is to be a network of research councils also in the Provinces and States. It is estimated that in the first five-year period as many as 700 research workers will have to be trained and equipped satisfactorily if the scheme is to be of any benefit. The Shanmukham Chetti Committee has recommended a block grant of six crores of rupees by the Central Government to meet the capital and recurring expenditure in the first five-year period and subsequently an annual grant of about a crore of rupees, to be raised by a cess of one anna for every Rs. 100-worth of industrial output, and as far as possible made leviable in the States as well as British India. The Committee realizes that universities constitute the foundation of all research and proposes the setting up of a grants committee to assess the financial requirements of university research departments and recommend grants accordingly. This has been the underlying idea of the latest research fellowship scheme endowed in English universities by Imperial Chemical Industries, Ltd., and Textile Machinery Makers, Ltd. The object of the Sir Walter Preston Scholarships instituted by the Textile Machinery Makers, Ltd., is to increase in the textile industry in general, and textile engineering industry in particular, the number of those possessing the highest qualifications in technology and experience in research.

In addition to the establishment of a national physical laboratory and a national chemical laboratory, specialized research institutes, we pointed out above, are to be started for food technology, metallurgy, fuel research, glass and silicate research, oils and paints, buildings and roads, leather and tanning, industrial fermentation and the electro-chemical industries. Indian tea and jute have their own research organizations already, but what of the cotton textile industry? Although it is the most important manufacturing industry in the country, the facilities at present available for technical training and higher research in the industry are woefully inadequate. The Department of Chemical Technology of the University of Bombay has been having a degree course in textile chemistry and only recently introduced a degree course in dyestuffs technology, while the raising of the L.T.M. diploma of the V.J.T. Institute to the degree standard is still to come; the University of Madras has already established a B.Sc.Tech. degree course in textile manufacture. So far as higher research is concerned, it was only the other day that the Government of Bombay appointed a committee to report on how the textile research carried on at the V.J.T. Institute on the engineering and manufacturing side, at the Department of Chemical Technology on the processing and chemical side, and at the I.C.C.C. Technological Laboratory on the raw cotton and spinning side could best be co-ordinated into a well-knit system. Planned research is of vital importance to the cotton mill industry of India, and its development calls for the concerted efforts of scientists, technologists and manufacturers. But the Shanmukham Chetti Committee's report makes no reference to the industry, presumably because it belongs to the class of industries which are to be encouraged to set up their own research organizations on a corporate basis, all research expenditure being exempt from income-tax assessments. In England recently an annual grant of Rs. 4,00,000 has been made by the Department of Scientific and Industrial Research to the British Cotton Industry Research Association and the Shirley Institute. The grant is subject to the Association's industrial income reaching Rs. 9,30,000 and will be increased by an additional rupee for rupee on incomes over this amount up to Rs. 6,70,000. It has been proposed to set up an engineering department at the Shirley Institute whose work should have considerable influence on the design and development of textile machinery. It is time, therefore, we too had our own "Indian Cotton Industry Research Association." Who is to set the ball rolling, however?

New Appointments in

Mr. S. D. Chard

THE Government of India has appointed Mr. S. D. Chard as Additional Textile Commissioner in the place of Mr. D. M. Passmore, C.I.E. Mr. Chard has been connected with the cotton mill industry in one way or other as he has been in the Indian cotton trade for more than two decades.

He came to India in 1919, just after the last war, in which he served as a Flying Officer in the R.A.F. He joined the firm of Messrs. Langley & Co., one of the leading European cotton firms in Bombay, and was connected with it until 1939 when it was voluntarily wound up. He then joined Messrs. Volkart Bros., which firm he latterly represented in Delhi as their liaison officer with the Central Government on all questions of control. In November 1942 his services were taken over by the Government

(*Continued on page* 776)

Mr. Nandulal M. Mehta

Mr. Nandulal M. Mehta, B.A., LL. B., who has been appointed Secretary of the Post-war Planning Committee (Textiles), was well known in textile circles in India as Manager of the Morarjee Goculdas Mills, Bombay. After taking the law degree, Mr. Mehta joined the Morarjee Goculdas Mills, Bombay, in 1918. He was made Assistant Manager in May 1925 and Manager in May 1934. He thus served the Morarjee Mills for over 27 years continuously and his work was outstanding as the mill is now one of the best in the country. Mr. Nandulal was a member of the Labour and Technical Advisory (Managers') Sub-Committee of the Millowners' Association, Bombay, from 1936 to 1941, and of the Advisory Committee of the Government Apprentice Scheme from 1937 to 1941. Chairman of the Managing Committee of the Textile Association (India) since its formation in 1939, he was also the President of the Bombay Textile Clerks' Union in 1940 and 1941.

The Textile Control Board have selected the right man for the key post of Secretary of their

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the Textile Directorate

Mr. Goverdhanbhai I. Patel

Mr. Goverdhanbhai I. Patel, B.A., until recently General Manager of the Standard Mills Co., Ltd., Bombay, which is one of the group of mills under the agency of Mafatlal Gagalbhai and Sons, has been appointed Assistant Textile Commissioner, Bombay, in charge of the utility cloth scheme. Before joining the Standard Mills, Mr. Patel was Manager of the New Shorrock Mills, Ltd., Nadiad, since 1935, and before that Secretary of the Ahmedabad Millowners' Association for over eighteen years.

Born in the year 1885, Mr. Patel graduated from the Elphinstone College, Bombay, in 1912 and went on a tour of Europe, America and the Far East. On returning to India in 1914 he took over the managing agency of the Ahmedabad Fine Spinning and Weaving Co., Ltd. He became an active member

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Mr. Dinshah Edulji Cooper

Mr. Dinshah Edulji Cooper, B.A., who has been appointed Additional Controller of Raw Materials and Stores in the office of the Textile Commissioner, Bombay, in the place of Mr. B. B. Joshi, L.T.M. (Hons.), A.T.I., is a textile expert of about 25 years' standing. After having been for seven years in charge of the weaving, bleaching, dyeing and finishing departments of the New China Mills, Bombay, he was appointed in 1941 Manager and Weaving Master in Shri Jagdish Mills, Ltd., Baroda.

After graduating from the University of Bombay, Mr. Cooper worked as an apprentice in the cotton mills of Tata Sons Ltd. for five years. He gained secretarial experience at the Empress Mills, Nagpur. After going through the engineering, spinning and weaving departments of the Standard Mills, he worked with the Manager for a period of two years. During this period he had the opportunity of acting for the Spinning Master, Weaving Master and Manager successively during their absence on leave.

Mr. Cooper was offered the position of Weaving Master on the expiry of his apprenticeship and

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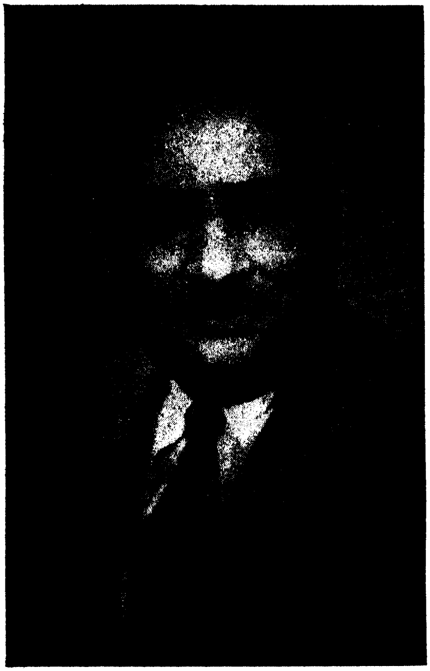
Mr. M. C. Dutt

Mr. M. C. Dutt, who has been appointed Assistant Director of Textiles, Bengal, was formerly Technical Officer to the Maharaja Kishangarh Mills, Ltd., Kishangarh, Rajputana, and Textile Adviser to the Aryan Silk and Cotton Mills, Calcutta, and the Bharat Laxmi Cotton and Silk Mills. An "old boy" of the V.J.T. Institute, Bombay, Mr. Dutt has had wide experience of cotton mills in India and abroad together with a sound knowledge of theory.

Mr. Vithalprasad H. Mehta



Mr. Vithalprasad H. Mehta, B.A., who has been appointed Assistant Textile Commissioner, Indore, has been in the textile line for nearly 18 years. He served as Manager for 11 years in different mills in Ahmedabad and Bombay, and became General Manager of the Kalyanmal Mills, Ltd., Indore, in 1942. About two years later he joined the Gendalal Mills, Ltd., Jalgaon, as General Manager. He has specialized in cotton selection, etc., having gained his experience in Uganda and British East Africa where he had worked for three years.

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Mr. S. D. Chard

and he was appointed Executive Officer of the Cotton Movements Panel. In that capacity, he rationalized the entire movement of cotton in India by rail in such a way as to enable mills to get their requirements of raw material without any hitch and to save, at the same time, precious wagon space which was in great scarcity at that time. Six months later, he became the Controller of Raw Materials and Stores (required by the textile industry). He held this position until April, 1945, when he went to Washington to represent India at the meeting of the International Cotton Advisory Committee jointly with Mr. S. K. Kirpalani, Trade Commissioner for India in New York. Earlier in the year, he paid a flying visit to the U.S.A. and the U.K. at the instance of the Government of India to study the cotton situation in those countries and to examine the chances of reviving India's export trade in cotton which has been hard hit by the war. As Controller of Raw Materials and Stores, Mr. Chard has been mainly responsible for the formulation and execution of the Government's control over raw cotton trade which broke the inflationary boom that began in March-April 1943.

Very polished in his manners, highly sociable, with a wit and humour of his own, the "old boy" is considered by all to be a delightful fellow to work with.

In the course of a statement issued to the Press, Mr. Chard observes:

"I have no hope of reaching the high standard of efficiency set by my predecessor, Mr. Passmore, who was well versed in the mysteries of spinning and weaving, a new line of course for me. However, I feel that an important part of my task is to form a human link between often cold Government and sometimes hot industry. And in that I might succeed.

"Our task is to get cloth to the people of this country. In that task, I would like to feel that the Press is on our side. I am not suggesting that you should pull your punches. Hit as hard as you like, but try to make your criticism constructive. We are only too anxious to remedy any of the errors of our ways which you point out. Similarly, if we are not the culprits but some social saboteur who is holding up cloth in the line of distribution, I hope you will attack that party with equal vigour. Let the public know the truth. That is the main thing. In all such matters, I have a high regard for the perspicacity of the Press. They can help us a lot and I would like you to tell your colleagues that they will all be welcome in this office. I look upon them as my friends."

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Mr. Nandulal M. Mehta

Post-war Planning Committee in Mr. Nandulal Mehta. He is very methodical, hardworking and straightforward and, with his wide experience and thorough knowledge of cotton mills and the textile industry as a whole, we are sure he will be able to contribute his best to the progress and development of the industry in the critical years that are ahead.

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Mr. Goverdhanbhai I. Patel

of the Ahmedabad Millowners' Association in 1914, and four years later its Honorary Secretary, in which capacity he rendered them yeoman service. He took a leading part in the settlement of several mill strikes and did not a little to introduce the principle of arbitration in the settlement of industrial disputes in Ahmedabad.

Mr. Patel was member of the Ahmedabad Municipality from 1921 to 1927 and was elected to the Bombay Legislative Council as a representative of the Ahmedabad Millowners' Association in 1923 and 1926.

Cheerful by disposition, Mr. Patel has won the regard of all who have come into contact with him and in the wider sphere of work to which he has been called his geniality and tact should be of assistance.

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Mr. Dinshah Edulji Cooper

he worked in that capacity for six years. In 1933 he was transferred to the New China Mills, where within a year he was able to introduce the double shift system. He erected and altered several looms in minimum time and with minimum number of hands. An expert in sizing, he has compiled interesting statistics about the technical working of a cotton mill which will be useful in the day-to-day management of a mill. Tactful and able in labour management he has several times succeeded in averting strikes. With his experience and knowledge, Mr. Dinshah Çooper should make a worthy successor to Mr. B. B. Joshi.

British Textile Machinery and Indian Mills

Sir Ardeshir Dalal's Warning

"THE majority of Indians will not wait for the delivery of British goods if American prices and other conditions are the same," declared Sir Ardeshir Dalal, Planning Member of the Government of India, in an interview. "But," added Sir Ardeshir, "it is likely that in some cases British prices may be lower."

Sir Ardeshir, who returned from a tour of America, explained that the difficulty in dealing with British manufacturers, from whom India especially needed textile machinery, was that they were prepared to accept orders provisionally on payment of a 5 per cent. deposit which would be forfeited if no firm order resulted and yet they were not in a position to quote firm prices and delivery dates. That was not their fault, of course, but the fault of the war.

"The result," Sir Ardeshir added, "is that, rather than place orders now under such circumstances, many Indian cotton millowners have decided that they might as well wait for some time when prices might also be lower." Regarding the firms which wanted a share in the control of the industries to which they were prepared to supply the necessary machinery, he added: "India intends to control her own expanding industries and those die-hard firms will not get our orders."

A New Cotton Mill in Mysore

Kapila Textile Mills, Ltd., Nanjangud

Secretaries: **The Associated Finance and Investment Corporation, Ltd.**
Asiatic Buildings, Kempegowda Road, Bangalore City (**Mysore**)

(*Exclusive to the " Indian Textile Journal"*)

PROPOSALS are in a very advanced stage for the establishment of a large textile mill in Mysore. The proposed concern, the Kapila Textile Mills Ltd., is not merely a textile manufacturing concern in the accepted sense of the term, but also a composite unit interested in the encouragement of growing of long-staple cotton, ginning of cotton and manufacturing the same into finished fabrics. In this sense it is an ambitious and comprehensive project with few parallels in India.

There is no doubt that abundant scope exists for the establishment of a ginning, spinning and weaving mill in Mysore in general and in the districts of Mysore and Mandya in particular, in view of the fact that more than 75 per cent. of the cloth and yarn requirements of the State is now imported from abroad, as well as of the fact that a considerable quantity of cotton grown in these areas is exported to Coimbatore or elsewhere outside the State. In the Irwin Canal area, the Mysore Government have successfully introduced a long-staple variety of cotton, of which one of the best is reported to be MA. 5 with a staple of approximately about 1 inch. More than 5,000 acres in Mysore and Mandya Districts have been put under MA. 5 and other long-staple varieties such as CO. 4. There is further scope for the expansion of the acreage up to about 25,000 with a production of about 10,000 bales annually. In the adjoining district of Mysore in the taluks of Chamarajanagar, Hunsur, T. Narsipur and Nanjangud, some long-staple varieties such as CO. 4 are being grown both as rain-fed and irrigated crops. There is thus scope for a large spinning and weaving mill producing fine yarn and fine fabrics in this area. It is proposed to open two ginning centres in Mysore District at Nanjangud, Hunsur, or Chamarajanagar, in addition to the present ginning factory at Maddur in Mandya District, which is owned at present by Government who have agreed to sell the same to the company on terms to be agreed upon.

With a view to assuring continuous supply of long-staple cotton of the required quality and quantities, to improve the quality and to secure the development and progress of the company generally, certain special features have been incorporated in the functions of the company, among which are the following:—

(i) Specialization in long-staple cotton, with a research and propaganda department attached, paying special attention to the selection of seeds and the standardization of varieties for the market;

(ii) special efforts to harmonize the interest of cotton cultivators and shareholders by plans of profit-sharing;

(iii) provision of financial credit to cultivators for their seasonal operation through co-operative societies and other institutions;

(iv) Welfare measures to promote the well-being of both the cotton cultivators and mill workers.

The proposed spinning and weaving mill proper will be located at Nanjangud on the banks of the river Kapila, about twelve miles from Mysore. Initially the mill will have 24,000 spindles and 500 looms.

With a view to ensuring the successful working of the company, the Government of Mysore have accorded their support to the scheme put forward by the company and have agreed to grant the following concessions and facilities:—

(1) Agreeing to sell the Government Ginning and Pressing Factory at Maddur to the company on terms to be agreed upon.

(2) Agreeing to prohibit under section III of the Mysore Cotton Control Act of 1942, for a period of ten years, the establishment of any other ginning and pressing factory in Mandya District.

(3) Agreeing to grant Government unoccupied land to the company at upset prices and to acquire, if necessary, private lands for the company at the cost of the company.

(4) Apart from the above concessions, arrangements are in progress for:—(*a*) power supply at Nanjangud; (*b*) placing at the disposal of the company a special staff of cotton inspectors; and (*c*) grant of a cotton farm of irrigated land to the company on suitable terms and conditions.

There are no Managing Agents, the management being directly under the Board of Directors. The Associated Finance and Investment Corporation, Ltd., Asiatic Buildings, Kempegowda Road, Bangalore City, will be the Secretaries of the company.

The authorized and issued capital is Rs. 30 lakhs divided into 6,000 cumulative preference shares of Rs. 100 each; 220,000 ordinary shares of Rs. 10 each and 100,000 deferred shares of Rs. 2 each. The called-up capital will be 3,000 cumulative preference shares, 220,000 ordinary shares and 100,000 deferred shares. The consent of the Government of Mysore has been obtained to this issue under rule 94-A of the Defence of India Rules as in force in Mysore.

The Directors of the company are as follows:—

Rukn-ul-Mulk, S. Abdul Wajid, Esq., B.A. (*Chairman*). Director: the Mysore Spun Silk Mills Ltd. (Revenue Commissioner in Mysore, Rtd.)

Dr. F. H. Noronha, M.B., Ch.B. (Edin.), D.P.H. (Camb.), Governing Director, the Associated Finance and Investment Corporation, Ltd.

D. K. Sheshadri, Esq., B.Com., Managing Director: the Aurangabad Mills, Ltd.

Bhoopalam R. Chandrasekharayya, Esq., B.A., M.R.A.

Rajakaryaprasakta Dewan Bahadur K. Ramaswamy, Esq., B.S.E., J.P.

H. F. Marker, Esq., L.C.E., M.I.E. (Ind.) M.R. San.I. Director: the Mysore Spun Silk Mills, Ltd.

M. A. Venkata Rao, Esq., M.A. General Secretary and Director, the Associated Finance and Investment Corporation, Ltd., Bangalore City.

Two prominent gentlemen have agreed to join the Board of Directors after the Central Government's and H. E. H. the Nizam's Government's sanction for capital issue in British India and Hyderabad, respectively, is obtained.

Compensation for Bombay Workmen

Rs. 10,00,000 Paid in 1944

MORE than Rs. 10,00,000 were awarded by the Commissioners for Workmen's Compensation in Bombay Province in 1944, states the report on the working of the Workmen's Compensation Act for that year.

The total awarded in contested cases, voluntarily deposited and paid under agreements registered with the Commissioners, was Rs. 10,07,010, compared to Rs. 6,26,285 in the previous year. This was exclusive of compensation paid direct by employers to injured workmen for injuries of a temporary nature.

Persons in respect of whom compensation was awarded number 627, of whom 34 were women and three were minors. In 322 cases the injuries proved fatal and in 281 cases, resulted in permanent disablement. The wage-group most numerously represented was Rs. 60 a month, with Rs. 40, Rs. 45 and Rs. 200 next in order. In 12 cases, compensation was awarded at the maximum rate while 305 workmen received compensation at the rate of Rs. 60 or over. The wage-group most numerously represented, in the past, had generally been between Rs. 20 and Rs. 24 and the rise to Rs. 60 is due to the payment of higher dearness allowance and bonuses, which are taken into account in calculating wages.

Deposits made voluntarily and under awards in contested cases totalled Rs. 10,43,809 (Rs. 8,58,142 in respect of fatal accidents and Rs. 1,85,667 for non-fatal accidents). Payments totalled Rs. 6,61,002 (Rs. 4,87,750 for total accidents and Rs. 1,73,252 in non-fatal accidents). There was a closing balance of Rs. 5,45,533.

End of Japanese War and its Reactions on America's Textile Industry

(By cable from Our New York Correspondent)

THE United States textile industry will be jolted when peace comes by drastic cut-backs in military orders and complicated reconversion problems, but the big pent-up civilian demand plus foreign relief requirements should furnish the needed shock-absorber during the transition period.

That viewpoint was held by the majority of the industry's leaders as the Japanese surrender offer came with dramatic suddenness.

Over the past month, producers became too absorbed with the fast-moving war developments—highlighted by Russia's entry into the war and the awe-inspiring news concerning the atomic bomb—to consider booking new business.

With peace, the industry's first concern will be the status of military orders for millions of yards of cotton, wool and rayon fabrics. Cut-backs and cancellations are taken as a foregone conclusion and it is an accepted fact that some confusion is bound to result.

Highly placed trade authorities guessed that the suspension of hostilities would bring cancellations running from 55 per cent. to as much as 95 per cent. in some categories and that future military procurements would be limited merely to amounts needed for the small armies of occupation.

Experts agreed that the speed towards reconversion will be geared to the pace at which Government controls are lifted. The controls that were imposed upon the industry under the exigencies of war included drastic price regulations and stipulated how the looms were to be used and how production would be distributed.

President Truman has ordered the War Production Board to see that "every opportunity is given to private business to exercise its ingenuity and resourcefulness in speeding the resumption of civilian production subject to war needs."

When the Chief Executive's suggestions become effective, millmen see an easier road towards the return of peace-time functions. Some cotton cloth producers showed particular willingness to book civilian business for late 1945 and early 1946 delivery but admitted that until priority regulations are moderated little progress in that direction can be made.

Cancellation of Military Orders will not Matter

Whether the Government moves quickly in the relaxation of controls or the procedure is delayed due to world-wide economic conditions, mill-men predict that any cancellation of military orders will find a ready outlet in civilian consuming channels. The shut-off from supplies since the attack on Pearl Harbour and the pent-up civilian demand will be swelled by the necessity to cloth returning veterans and by the tremendous demand seen likely for foreign relief.

The Netherlands, the Philippines, China and other liberated nations all are expected to have urgent relief problems. China is expected to be given top priority rating in its quest for goods. Recently, China has been attempting to obtain large quantities of goods here but with little success, due to the pressure of military needs. Chinese buyers sought an estimated 15,000,000 yards of cotton fabrics on a monthly basis, a demand which was expected to extend throughout the fall season.

Meanwhile, Chinese purchasing missions, unable to fill their demands here, simultaneously sought goods in Brazil and Mexico. With 90 per cent. of Chinese looms estimated to be in Japanese-occupied territory and the likehood that machinery damage has been enormous, Chinese needs for textiles were believed to be little short of desperate.

Netherlands Needs

Equally large demands are expected to emanate from the Netherlands. The Dutch textile industry, able to supply but a small fraction of the country's needs of essential garments, has turned to the United States market. At the time of the German invasion in 1940, Dutch textile stocks were sufficient for several years but with German looting, stocks in the Netherlands were exhausted a long while ago. Whenever shipping is available and stocks can be procured here, Holland is expected to be a consistent buyer in the domestic market for a period extending into 1947.

Machinery Manufacturers' Problem No. 1

Textile machinery manufacturers have contended that the domestic industry's big problem is not reconversion but man-power. Edward L. Martin, President of the H. & B. American Machinery Co., predicted that the world demand for textile machinery will approximate 7,000,000 (M) spindles, involving about $280,000,000 (M) for mill equipment. Martin suggested, " There are at least five years of prosperous times ahead for textile machinery manufacturers. "

Cotton Goods Price Ceilings

While the industry discussed the long range, peace-time outlook, trading in cotton, wool, and rayon fabric markets came to a practical halt. The cotton goods industry became completely tied up in a muddle over price ceiling revisions and drastically altered Government controls over production and distribution under War Production Board order EM-317-A.

The mills, unable to sell profitably at the present price ceilings due to the rise in raw cotton price to a 17-year high plus an increased wage rate and other higher conversion costs, petitioned for an increase in ceiling prices. The Office of Price Administration granted a tentative increase up to 4 per cent. Strenuous objections then arose on the grounds that a 4 per cent. rise wouldn't be sufficient to compensate the mills for increased costs. Later the Office of Price Administration extended the constructions eligible for higher prices but limited the increase to 5 per cent.

A few mills went ahead and sold on the tentative price increase but others held back until they could find out exactly how much of a rise would be allowed. Consequently, trading activity fell to the year's lowest level.

Labour Unrest

Meanwhile, rumblings of labour trouble appeared on the important Fall River, Massachusetts, production front. Workers associated with the Textile Workers Union of America (C.I.O.) ratified a petition for a strike vote in 13 mills by 1st September. If the strike materializes, some 11,000 workers will be affected. That eventually would be felt most in the production of combed yarn constructions on which the mills are working to fill military orders for underwear, shirts and other apparel items.

In wool fabrics, the Government has removed practically all controls over production but the back-log of undelivered orders for worsteds and woollens was expected to prevent the effects being felt in civilian clothing until the fourth quarter of this year.

Wool associates of the New York Cotton Exchange, Inc., pointed out that with 12 to 14 weeks required before stock deliveries of civilian worsteds could be made following the changeover from military orders, the benefits obviously could not be passed on until the production of spring merchandize began.

Rayon is expected to be the first category to find itself almost free from war orders. Some estimates of military cut-backs may rise as high as 95 per cent. Tyre-cord, produced from rayon and cotton, will be cut-back to a very large degree, possibly 90 per cent., well-informed quarters indicated.

Although textile men anticipate many problems after the war, the majority opinion holds to the confident belief that once the industry is relieved of war-time restrictions and is back on a normal level, rapid strides will be made toward a sound peace-time economy.

Blueprint for Britain's Textile Trade

Wholesale Textile Association's Report

(By cable from Our London Correspondent)

A BLUEPRINT for the post-war rebuilding of Britain's textile trade on solid foundations as laid down by a special panel of experts is envisaged in a report published by the Wholesale Textile Association.

The Association's committee circulated a meticulous questionnaire among wholesalers and also widely distributed it among manufacturers and retailers of all classes. The Association members said that the analysis of the replies to these questionnaires established beyond doubt, from a national viewpoint, that there is an immediate need for rectifying the maladjustments of the pre-war years. The Association's report, with recommendations and remedies for the future, was formulated on the basis of the answers to the questionnaire.

The report does not attempt to minimize the textile trade's shortcomings. The main tenour of the report is that " it must adopt both individually and as a trade a more progressive future outlook . . . The whole machinery of wholesale distribution must be overhauled and adapted to modern trends."

Critics of the report said that these were strong words. They conceded, however, that they were fully justified by the evidence that there is something radically wrong with the textile trade more deeply rooted than merely depressed textile manufacturing.

The recommendations, summarized, said that the trade should work along the lines of a settled policy which must eliminate " uneconomic competition " through a medium of fair trading. The recommendations also envisage long-term planning between wholesalers and manufacturers and closer co-operation with retailers' representatives.

The report said that any tendency to circumvent the wholesaler would inevitably restrict independent retailers and tend to promote combines and monopolies to the detriment of individual initiative and free competition.

The recommendations said that the wholesalers must recognize their function in acting as the *selling* side for manufacturers. They must take all the necessary risks and feed the producer with orders, thus enabling continuity of production and an outlet for products. Steps also must be taken to ensure that only *bona fide* retailers can buy at wholesale prices and a speedier service for customers must be established. For employees, higher wages, better hours, pensions, canteens and educational training are recommended.

The questionnaire evinced the criticism of manufacturers that the wholesalers are not fulfilling many essential services. The manufacturers said that the wholesalers should be able to even up demands during seasonal fluctuations, thus facilitating a steady production for manufacturers. The wholesaler should be able to discriminate better than the manufacturer regarding types and designs of goods which the general public demands. The wholesaler should function as a stock-keeper for both the retailer and the manufacturer and expedite immediate deliveries. By breaking the bulk and housing a wide variety of stock, the wholesaler could reduce transport costs and the numbers of travelling salesmen.

The answers of the retailer to the questionnaire generally deplored the lack of knowledge on the part of commercial travellers concerning their wares. The retailers urged that travellers should be specially trained, enabling them to carry on technical discussions with retailers concerning their merchandise. The report of the Association most strongly urged a higher degree of specialization for textile travellers. It expressed the opinion that the days of the general traveller are finished and that textile travellers, particularly, must travel *departmentally*. The report pointed out that wholesalers too often spread orders among too many customers, so that individual orders are insufficient to ensure continuity of production. Through lack of departmentalization, general travellers had a hard time securing orders on showing samples only. This caused the wholesaler to place contracts on a wider range of goods which threw back on to the manufacturer the task of holding stocks, thus leading ultimately to deferred deliveries.

The report classifies this as " uneconomic competition, " apparently meaning competition outside the realm of price and quality.

The report urges that such forms of competition should be immediately outlawed with the textile associations and vested powers invoking legal sanctions against trade members engaging in such practices. The report also suggested that *bona fide* textile distributors should be registered with definite fundamental conditions of trading approved and laid down.

Briefly, the committee's recommendations are aimed at eradicating " cut throat " competition in the trade when there is a surplus capacity. Reading between the lines there appears to be evidence that the textile trade has suffered through ill-advised price-cutting plus an ineffective system of cost accounting within the trade.

The committee claimed they found the answer in the argument that textile houses, on the average, are unable to secure a turnover sufficient to justify their capital or even the size of their buildings.

The report apparently accepts Britain's disastrous air-*blitzing* as a disguised blessing which to a large extent provided a spring house-cleaning for the untidy and unhealthy wholesale textile trade. The report recommends that *blitzed* warehouses should be rebuilt in the centres of forming markets in all big cities. The recommendations envisage a process of consolidation within the textile trade and the release of superfluous capital as a starting point for ultimate prosperity.

In the teeth of the Labour Government's programme for industrial " socialization, " the committee's report amounts to a special plea for self-government in industry. The committee punches home its recommendations, asserting that the textile trade's future lies in adopting the " vigorous policy now prepared. "

Indian Industrialists Mission to America

Capital Goods and Dollar Credits ?

MEMBERS of the unofficial mission of Indian industrialists, headed by Mr. G. D. Birla and Mr. J. R. D. Tata, who are now in the United States, generally are disappointed with the results of their efforts to date. Reports show that they are increasingly convinced that the United Kingdom rather than the United States will be the mainstay of India's export and import trade in the immediate future.

Mr. J. R. D. Tata, a member of the unofficial Indian industrial mission to the United States, told the " United Press of America " that he felt the mission was somewhat premature, but it had not been a failure.

" Things are in a fluid state in this country now," he said, in describing the economic situation of the United States. " It is not easy to get a clear picture. It is not the proper time now, perhaps for us to make purchases. Our mission was exploratory and has been instructive and worthwhile."

Mr. Tata added, however, that he could not help but feel personally that the visit was somewhat premature and said that he hoped to return within a year or 18 months when the supply situation would be clearer. He said that the United States still was concentrating on war production and planning for reconversion from war-time to peace-time production.

The tour of Pacific Coast cities by the Indian leaders was concerned principally with the aircraft industry, Mr. Tata said, adding that he was interested not only in American aircraft but also in American airline equipment.

Two members of the delegation expressed the hope that America would " use its political influence with England " to give India political and economic freedom. In a joint interview Mr. G. D. Birla and Mr. N. R. Sarkar said: " Until India is given political freedom, all talk of industrial expansion for India has little meaning."

Mr. Birla declared: " The immediate hope is that the United States will place large dollar credits at England's disposal so that Britain will release Indian sterling credits to purchase capital goods."

Terming Britain's sterling control as " unjust and wrong," Mr. Birla added " India's current dollar credit should be handed over to India and not to go into the British pool."

" Unless this is done immediately, the industrialist said : " India's war against poverty, disease and illiteracy cannot be waged successfully."

India is badly in need of dollars with which to make purchases in the United States and Indian leaders would welcome any aid they may be able to get in this respect, Mr. G. D. Birla, speaking for members of the unofficial delegation of Indian industrialists now visiting the United States, told U.S. Government officials at a luncheon given by the Americans to the Indian visitors.

Egyptian Cotton Exports and Their Future

(From Our Special Correspondent)

THE Egyptian Government's decision to increase the cotton prices of the next crop by 10 per cent. has again raised the controversial question as to whether the future of Egypt's principal export commodity is bright or not.

The cotton operators and landlords are evidently pleased by this much-hoped-for increase of price, but financial circles as well as more discerning exporters feel that the persistent boosting of prices may in the long run be seriously detrimental to the disposal of the country's basic product. They argue that instead of keeping cotton prices high, Egypt should, on the contrary, endeavour to align itself with the cheaper American prices in order to regain its pre-war European markets. The high cost of Egyptian cotton, it is claimed, would hamper the resumption of exports to the European continent, which although threadbare and hungry for textiles, might with better shipping facilities turn to cheaper sources of supply such as the United States and India. Russian cotton production must also be taken into account especially for those countries of the Balkans and South Eastern Europe, to which Egypt used to export and which now are being drawn more closely to the Soviet economy.

Since the begining of the war in the Mediterranean, each successive Government has under the pressure of landlords and powerful commercial groups, raised prices year by year without taking into consideration either economic laws or world market conditions.

So far it has worked out well and there is no doubt that the intervention of the Egyptian Government and the controlled buying policy of the British Cotton Co-ordinating Committee, have prevented a drop of prices when exports were practically at a standstill. It has also saved the country from considerable economic difficulties. But now that the war is over in Europe, it is felt that more normal trading and export conditions should be sought as well as encouraging the market to regain its logical equilibrium. Continuous raising of the prices would not achieve these ends and encourages speculative buying in the hope of new soarings at a time when a return to free exports are considered desirable.

The price increases have created a vicious circle by which landlords raise land rents on the strength that the yield of cotton is more profitable, thus giving the supporters of price-upstepping their pet argument that production costs are always rising. This added to the ever more acute shortage of available arable land, results in such high rents that it is becoming difficult for the *fellah* to work the land profitably. An expert told me that some of the best soil in Upper Egypt was being rented for as much as 100 dollars per feddan yearly whereas the yields of similar land planted by the landlord himself were below 50 dollars. It is clear that higher prices do not necessarily mean better conditions for the *fellah*. Hence a social problem of some magnitude.

Britain is Egypt's main cotton customer and buys about 85 per cent. of the total crop. At present no British spinner can buy cotton directly and freely. He must go through controlled Government agencies. In the present state of Anglo-Egyptian relations, in which from the Egyptian side the accent is on treaty revisions and mobilization of sterling holdings, anything pertaining to cotton consequently becomes a matter of considerable political importance.

The British are understandably opposed to high cotton prices and political considerations may have driven them into a reluctant acceptance of the 10 per cent. increase. Nevertheless, the British Buying Commission has demonstrated its displeasure about prices by stopping all purchases for the last three months.

The Egyptian Government used as one of their arguments in favour of price increase, the fact that the United States were granting their growers an export subsidy of 5 dollars per kantar. The Minister of Finance stated in the Egyptian Parliament that he had endeavoured through diplomatic channels to have the American subsidy abolished but that this had not been successful. Experts point out, however, that the position of Egyptian and American cotton is so radically different that the U.S. subsidy is no point in case as far as the export of Egyptian varieties is concerned. They say that even if there was no American subsidy, the problems facing the exporters of the high-priced Egyptian product would still exist. Some people believe that the rapid development of artificial fibres may in the near future render the use of Egypt's long-staple cotton more indispensable than is generally imagined by local wishful thinkers.

Another of Egypt's most pressing problems is the almost desperate need of what is called here "hard currency," meaning principally dollars and, to some extent, Swiss francs. To earn such "hard currency" Egypt must export some of her cotton to destinations outside of the sterling areas. Therefore, a vigorous resumption of export trade is indispensable and this will largely be ruled by prices and the suitability of varieties as soon as shipping facilities ease up, all the more so that Egypt is in a rather unfavourable position as regards tonnage. At present this is a buyer's market with the accent almost entirely on transport possibilities. Price is now not so important but this may change soon. The negotiations between Egypt and Sweden for a barter arrangement so as to exchange one million kantars of cotton against Swedish timber are indicative of the present difficulties. But far-seeing exporters are alarmed at a tendency to resume the unhappy barter and clearing system, which caused so much trouble in pre-war Europe.

It would be unfair to suppose that the Egyptian Government takes the narrow view. That they are worried and are looking ahead is proved by their declared policy to remove war-time restrictions on the purchase and export of cotton at the earliest date. The British Embassy in Cairo has been approached with a view to re-establishing more normal and economically healthier conditions.

Indian Central Cotton Committee

Half-yearly Meeting

THE monsoon meetings of the Indian Central Cotton Committee and its Sub-Committees were held from the 23rd to the 28th July 1945, Mr. H. R. Stewart, C.I.E., Vice-Chairman, Imperial Council of Agricultural Research, presiding.

The most important subject affecting the interests of cotton growers which came up for consideration was that relating to the question of floor and ceiling prices of cotton for the ensuing (1945-46) season. In the course of the debate, the view was expressed that the Government of India's approach to the problem was quite wrong and that unless and until the cost of living and the cost of production were materially lowered, there was absolutely no justification for the proposal to further reduce the floor prices by Rs. 50, i.e., from Rs. 350 to Rs. 300; even last year the Committee had given it as its considered opinion that the view that cotton floors should provide no more than a very small margin of profit to cotton cultivators was not consonant with providing a reasonable living to the cultivator. It was urged that the Committee should not be a party to any scheme which prevented the destitutes from improving their position; the price of raw cotton was disproportionately low compared with the prices of textiles, piecegoods and yarn and, in any case, nothing had happened since July 1944 when the floor was reduced from Rs. 400 to Rs. 350, to warrant any further reduction. On the other hand, production costs, particularly labour wages, prices of fertilizers, implements and plough cattle had risen appreciably, and there was thus a strong case for raising the floor prices by Rs. 50 to help the growers to balance their budget. After a lengthy discussion, in which representatives of cotton growers, mill-owners and the trade took part, the following resolution, moved by Sir Chunilal B. Mehta (Vice-President), was unanimously passed by the Committee:—

"The Indian Central Cotton Committee is of the opinion that during the season 1944-45 cotton cultivators have suffered heavy losses owing to:

(1) substantial reductions of premiums for 1944-45 in a number of varieties compared with 1943-44,

(2) short crop resulting from heavy reduction in cotton acreage as per Government plan in order to carry out the 'Grow More Food' campaign,

(3) average prices realized this season since 1st September 1944 to 30th June 1945, being below the average for the same period for the season 1943-44, and

(4) no reduction in the cost of living or in the cost of production.

The Committee, therefore, urges the Government of India that it is essential that the floor prices for all varieties of cotton for the 1945-46 season should be raised by Rs. 50 per candy from the 1944-45 floor levels."

International Agreement

Another matter which received the attention of the Committee was that relating to the question of the proposed international agreement for the production and export of cotton. The consensus of opinion was that in any such agreement India should have her quota of cotton exports on the basis of such pre-war *pro rata* percentages as may be given to other more important cotton exporting countries and that her production should be determined on the basis of such export quotas plus internal requirements. In this connection, the question of Indian representation at International Cotton Conferences was also discussed, and the Committee resolved to recommend to the Government of India that, at all future International Cotton Advisory Committees and Conferences, the Indian delegation should include at least one non-official member of the Indian Central Cotton Committee and that in the matter of giving directions to the delegation the Indian Central Cotton Committee should be consulted.

The question of the possibility of increasing the use of Indian cotton in mills in India was also discussed at great length by the Committee. It was observed that whilst the consumption of Indian cotton in mills in India had appreciably decreased in 1943-44, the consumption of foreign cotton during the same period had markedly increased. The view was expressed that the increased consumption of foreign cotton might be due to the premium which mills received for cloth manufactured from such cotton, and the abolition of this premium was suggested. In reply it was stated, however, that foreign cotton was being imported mainly because of the demand by consumers in the country for fine cloth to meet which the supply of suitable Indian cotton to the extent required was quite inadequate. After further discussion, it was decided, in view of the complexity of the problem, to refer the matter to the Local Sub-Committee for a fuller investigation from all aspects of the problem.

Synthetic Competition

The probable competition between cotton and synthetic fibres in the post-war years also engaged the attention of the Committee; it was agreed that the problem was one which demanded the earnest consideration of all cotton-growing countries. It was accordingly decided that all available information should be collected and placed before the Committee particularly regarding the position in America which, in this respect, was similar to India, both being cotton-growing countries.

The question of reversion to pre-war lashings for cotton bales also came up for consideration by the Committee. After a lengthy discussion, the Committee concluded that the disadvantages resulting from reduction in the number of lashings far outweighed the saving in money effected. Since the Karachi Chamber of Commerce, Karachi Cotton Association and the Sind Cotton Ginners' Association were all in favour of reverting to the pre-war number of lashings, and as the investigations conducted at the Committee's Technological Laboratory some years ago had shown that the degree of density within the range experimented had no deleterious effect on the cotton fibre, it was decided that the factories should be strongly advised to revert to pre-war 12 lashings in the interests of the reputation of India cotton bales and in order to prevent waste of shipping space and loss resulting from bursting of bales due to inadequate lashings. It was further decided that the desirability of covering the bales properly with hessian cloth of standard quality should also be stressed to the factories.

Cotton Crop Forecasts

The report of the Cotton Forecast Sub-Committee on the *post-mortem* examination of all-India cotton forecasts of the 1943-44 season was adoped by the Committee, and it was decided that the discrepancies observed between the forecast and the estimated actual crop should be brought to the notice of the forecasting authorities in the various Provinces and States.

Considerable discussion took place on the desirability of having an annual census of stocks of cotton held by the trade. The Committee could not accept the view of the Government of Madras that legislation for this purpose was not essential during the war. It was noted with satisfaction that the Government of Bombay had decided to enact the Cotton (Statistics) Act and that pending its enactment the question of making special arrangements to collect statistics of stocks of cotton this year on a voluntary basis in respect of the various pressing centres in the province was receiving the consideration of the Provincial Government. After a lengthy discussion, it was decided that the action proposed to be taken by the Government of Bombay should be brought to the notice of the provinces and States which have not so far accepted the recommendations of the Committee *in toto* and the importance of collecting the statistics in question even during the period of war stressed to them.

The Committee considered a draft revised trade classification of Indian cotton and accepted it for adoption in connection with the all-India cotton forecasts.

The Committee extended for a period of one year the scheme in operation in the Central Provinces and Berar for crop estimating survey on cotton. Crop-cutting experiments of this type are the first to be undertaken in the country; such experiments provide the most reliable basis for estimating crop yields. It is hoped that, by the end of the extension of one year sanctioned for the scheme, the experiments would be brought to a successful conclusion to serve as a model for other cotton-growing Provinces and States.

The annual progress reports on the work done during the past year at the Committee's Technological Laboratory and on the various research, seed distribution, marketing and crop estimating survey schemes financed by the Committee in the Provinces and States were reviewed and recommendations made regarding the future lines of work. A new scheme was sanctioned for the evolution of long-staple cotton of over 1-1/16" in staple which at the same time combines the characters of hardiness and good yield and is suitable for growing under summer conditions in parts of Madras Province.

The Committee also approved of a new scheme for the creation of a pure "Wagotar" cotton zone in the Mehsana District of Baroda State to cover an area of 70,000 to 80,000 acres.

Rao Bahadur Sir Madhaorao Deshpande, Mr. L. Madhava Reddi and Major Nawab Mohd. Jamshed Ali Khan were elected cotton growers' representatives of the Committee on the Board of Directors of the East India Cotton Association for the year 1945-46.

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Empire Cotton Growing Corporation

THE Administrative Council of the Empire Cotton Growing Corporation, at a meeting held in Manchester on Tuesday, 5th June 1945, elected the Marquess of Linlithgow as their President, in succession to Lord Derby who, after 24 years as President, has resigned but has accepted the office of Patron of the Corporation.

The Chairman of the Council, Mr. Arthur Foster, J.P., when announcing this appointment at the annual general meeting which followed, said that the Council considered themselves fortunate that Lord Linlithgow had signified his willingness to become their President. Before his term of office as Viceroy of India, Lord Linlithgow had been Chairman of the Royal Commission on Indian Agriculture. He was not only keenly interested in all agricultural problems, and in scientific research, but during his Viceroyalty had maintained close touch with the cotton-growing industry in India.

The Council received with deep regret news of the death of Lord Lugard, who had been one of their Vice-Presidents since the Corporation received its Charter in 1921. The Chairman paid tribute to the great value of Lord Lugard's advice, so generously given on the many occasions when he was consulted.

The Annual Report of the Council to the Corporation and the audited accounts for the year were adopted. In presenting the report, the Chairman emphasized the fact that during the 24 years of the Corporation's existence, they had held unswervingly to their policy that cotton must find its place in a properly balanced system of agriculture, in which the necessary food crops must take priority. There could be no thought of exploiting either the land or the cultivator in order to stimulate cotton-growing. He was not quite sure, however, that the Corporation had succeeded in making it universally clear that they have no commercial objects and wish to increase the amount of cotton grown in the Empire, and to maintain or improve its quality, in those areas only in which the attainment of these objectives will promote the welfare of the cultivators, while ensuring at the same time that the need for conserving soil fertility will be kept constantly to the fore. The Corporation's policy in these respects had always been fully understood and approved by the Colonial Office.

Resettlement of Demobilized Persons

Network of Employment Exchanges

THE Government of India are setting up a co-ordinated organization to deal with the resettlement and re-employment in civil life of demobilized members of Defence Services and discharged war workers.

A network of Employment Exchanges will be set up under the Labour Department to facilitate the registration for and placement in civil employment of demobilized persons. There are, at present, ten Employment Exchanges functioning in India for the registration and placement of technical personnel. Their number will be increased to 71 by February, 1946. There will be a Central Exchange, nine Regional Exchanges, two Special Exchanges for naval and aircraft trades and 59 Sub-Regional Exchanges. Attached to each Sub-Regional Exchange will be a number of Employment Information Bureaux to serve as a supplementary channel for communicating information and advice to demobilized persons on all matters relating to their training, registration, placement, etc. The Regional and Sub-Regional Exchanges will also have Employment Advisory Committees consisting of representatives of workers and employers.

This set-up will be the beginning of a well-organized and co-ordinated employment service to help workers to find the most suitable employment, to assist employers to secure the most suitable workers and to ensure that the available workers and available jobs are brought together as promptly and satisfactorily as possible. It will also ensure that the necessary skills are available and are distributed satisfactorily among the various branches of production.

Military and industrial demobilization after the war will require effective machinery for facilitating the transfer of large number of workers from one job, occupation, industry and area to another. It will be necessary to collect in advance information regarding persons likely to be seeking work, employment opportunities likely to be available for various categories of workers and the probable area-by-area balance of labour supply and demand. Employment readjustment during the transition from war to peace will raise special problems and positive steps will have to be taken to facilitate the mobility of labour, both occupational and geographical. Programmes of technical training and vocational guidance for demobilized persons have to be organized to equip them for the type of employment for which they are most suited and for meeting the man-power requirements of post-war development schemes.

These problems will be dealt with by six Directorates which are being established at the headquarters under a Director General of Resettlement and Re-employment. The Directorate of Employment Exchanges and Statistics will supervise, integrate and direct the work of Central, Regional and Sub-Regional Exchanges. It will collect data regarding the number of persons likely to be demobilized and the employment opportunities likely to be available and all other relevant information pertaining to employment. The Directorate of Employment will function as an employment-finding body. It will tap all available sources and explore new avenues of employment and keep abreast of post-war development schemes. In collaboration with Government factories, railways, Provincial Governments and civil industry the Directorate of Technical Training will organize facilities for further technical training and apprenticeship training for such demobilized technicians as may need them for civil employment. The Directorate of Vocational Training will prepare schemes for the training of demobilized persons in non-engineering trades and vocations, and will organize training facilities in collaboration with Provincial Governments, Universities and private institutions. The Directorate of Publicity will popularize the employment of demobilized persons in civil employment, and canvass private employers. And, lastly, the Directorate of Welfare (Follow-up) will maintain a close liaison with labour welfare organizations of the Central and Provincial Governments with a view to ensuring that the interests of demobilized persons in civil employment are being properly watched and safeguarded.

For the purpose of this organization the country has been divided into nine regions, i.e., Punjab and N.W.F.P.; Sind and Baluchistan; Delhi, Ajmer and Merwara; U.P., Bihar and Orissa; Bengal and Assam; C.P. and Berar; Bombay; and Madras and Coorg. The Regional Organization will be under a Director of Resettlement and Employment, and attached to him will be an Employment Advisory Committee consisting of representatives of Government departments, employers and workers organization and soldiers', sailors' and Airmen's Board.

The Resettlement Organisation will obviously require trained managerial staff to work the new Employment Exchanges. Arrangements for training are well in hand. The services of an officer from the Ministry of Labour and National Service in the U.K. have been obtained for conducting the training course. Civilian and services personnel required for the posts of manager and assistant managers in the Sub-Regional Exchanges, and deputy managers and assistant managers in the Central and Regional Exchanges is being recruited. The training of the first batch of officers will shortly commence at Delhi. Arrangements are also being made with His Majesty's Government for the training of managers for Central, Regional and Special Employment Exchanges in the United Kingdom.

The duration of this scheme will be five years. Before the end of this period, the position will be reviewed in consultation with Provincial Governments.

Although the primary function of the Resettlement Organization will be to deal with the resettlement and re-employment of demobilized members of defence services, it is hoped that this organization will eventually develop into a permanent employment service closely integrated with the economic policies for achieving full employment and higher living standards for the people of India.

Victoria Jubilee Technical Institute Old Boys' Association, Bombay

First Annual General Meeting

THE first annual general meeting of the Old Boys' Association, V.J.T.I., was held on Wednesday the 18th July, 1945 at the Institute premises when 47 past students and the present Principal of the V.J.T. Institute were present. Khan Sahib D. M. Karkhanawala was unanimously elected to the chair.

The annual report and the statement of accounts were read and adopted unanimously.

The following managing committee for 1945-46 was declared duly elected: Messrs. P. B. Advani, L.T.M. (Hons.), M.Sc. (Tech.), Chairman; D. B. Katrak, L.T.M. (Manager, Khatau Mills), Vice-Chairman; H. Alijan, L.E.E. (Retired Traffic Supdt., G.I.P. Rly.), Vice-Chairman; Narain V. Ullal, L.T.M. (Hons.), A.T.I. (Spinning Master, Khatau Mills), Honorary Secretary; P. W. Dharap, B.A., L.M.E., L.E.E., Deputy Head, Electrical Department, V.J.T.I., Joint Honorary Secretary; S. N. Jhaveri, L.M.E., L.E.E., Honorary Treasurer and S. D. Oke, L.T.M. (Hons.), B.Sc. (Tech.), (Manager, Jam Mills), B. B. Joshi, L.T.M. (Hons.), Khan Sahib D. M. Karkhanawala, L.T.C. (Assistant Chemical Analyser, Government of Bombay), Dr. K. T. Bandukwala, L.T.C., Ph.D., (Manager, Bombay Soap Factory), Jal S. Rutnagur (Editor, *Indian Textile Journal*), A. Seshan, L.S.E. (Contractor in Sanitary Fittings), A. E. Ghasletwala, L.S.E. (Contractor in Sanitary Fittings), S. Krishnappa, L.T.C. (Chief Chemist, Bombay Gas Company), J. H. Doshi, L.E.E., and Principal P. N. Joshi as Members.

The Chairman, addressing the meeting, said:—

" In the last 25 years, more than half a dozen attempts have been made by the past students to form an association. Every time the Association after a year or two has ceased work on account of its failure to help the past students or at least to establish the status of our graduates in business, industry and engineering. I have always found that the Institute authorities have been lacking in their support to the Association.

" In these days of hard and ever increasing competition, it is for the authorities of the Institute in the first instance and the Association of past students to show by propaganda and other means to the business community, industry and the engineering world that the status of the graduates is in no way inferior to others similarly qualified.

" As I understand it, this Association has been backed by the Institute authorities. It has got ample scope to work in the right direction. It will be futile to try to run the Association simply for the purpose of arranging lectures on technical and engineering subjects fortnightly or monthly or to arrange visits to workshops and laboratories periodically.

" I hope this Association would undertake positive work in the interest of the past and the future students."

Origin of the Association

Principal P. N. Joshi suggested to some of the past students of the V.J.T. Institute who had gathered together during the first All-India Textile Conference held in the Institute premises during 9th, 10th and 11th March 1944, the necessity of starting such an association, as many past students were gathered on the occasion. A meeting was convened on 10th March 1944 and it resolved to start such an association and a provisional committee was formed to draft the constitution.

A general meeting of the past students was held on 26th July 1944, for adopting the draft constitution, in the Institute when 48 past students were present, representing all sections.

The second All-India Textile Conference brought another opportunity for increasing the strength of the Association. At the close of the year the members enrolled were 152.

Post-war Planning

A Neglected Aspect of the Indian Textile Industry

By LALBHAI R. MEHTA

(Specially Contributed)

POST-WAR planning is in the air. Average readers used to laugh when they read the announcement of the Government of India in 1941, that the Government is seriously thinking of post-war planning and that a new department to tackle the problems relating to the post-war planning of India was being started, especially because Nazi Germany was scoring victory after victory in Europe. In spite of the succession of Nazi victories in Europe, the post-war planning campaign went on rigorously in India, and continually increased in proportion, particularly after the Nazi debacle in Russia. The Indian textile industrialists didn't lag behind. They knew well how to make the best use of the opportunities they got and are fully alive to the post-war possibilities. Some of them have personally visited the U.K. and U.S.A. to avail themselves of the latest progress in textile research. It is a very happy sign indeed. It seems that their prime considerations are centralized only in the methods of increasing the efficiency and the amount of production, but it is a matter of regret that they seem to overlook or neglect the equally important question, namely, that of distribution. In a free democratic country the Government looks after the interests of their industries, while in a subjugated country like India, the rulers look more to the interests of Manchester and Lancashire textile industry than the Indian textile industry. So long as this sad fact remains, the responsibility of the post-war planning of the production and distribution of the textile industry rests upon the Indian textile industrialists and the representatives of the Indian textile trade. The planning of distribution is of no less importance than that of production.

The Importance of Post-war Planning of Distribution

As the two great textile producing countries, namely, the U.K. and the U.S.A., have until recently been preoccupied with the production of arms and ammunition for the huge Allied armies, which are fighting the third great textile producing country, namely, Japan, the only remaining textile producing country, namely, India, got vast opportunities for developing its industry as well as its trade. It will take some years for the textile industries of the U.K. and the U.S.A. to be able to export their textile production on an appreciable scale, while Japanese industry was being systematically and rapidly bombed out of existence. The Indian textile industry, thus, got a very vast field of market for their textile production, nay, vaster than is required for her export trade, India being the only textile producing country on an appreciable scale throughout Asia, Africa and Indonesia.

To cope with the task ahead, the Indian textile industry has to face many problems, the most important of which is distribution. Unless the distribution of production is scientifically and systematically planned to the last detail, there is every possibility of godowns being clogged with textile products in spite of the existence of a vast market in India and abroad. The U.S.A. and the U.K. have their organizations under the guidance of technical experts and economic brains who were closely watching and studying the international trade and industrial developments and were planning to the last detail to meet the post-war developments. Our industrialists seem to have overlooked this aspect or underestimated its importance. This mistake should be remedied immediately.

How to Prepare Post-war Planning of Distribution

The Indian textile industrialists had been well organized before the commencement of the war which made it possible for them to derive the utmost benefit out of the war situation, but the Indian textile trade was not organized. Indeed there were some textile merchants' associations, mainly in the producing centres, but only a few merchants had joined them, which practically had no voice in shaping the policy of distribution of textile production. But after the promulgation of the Cotton Cloth and Yarn (Control) Order in June 1943 and subsequent introduction of one restriction after another, made the textile dealers realize that unless they organize, their interests are at stake. The numerous control measures aroused dealers all over India. They began to organize and form associations and fought sectional struggles to safeguard their interests. But individually they had no voice strong enough to make itself heard when the problem of distribution on an all-India scale arose. Thanks to the strenuous efforts of Mr. Gordhandas G. Morarji and his colleagues, an attempt was made to co-ordinate the textile merchants' associations on an all-India basis; and for the first time the representatives of the textile trade from all over India assembled on a common platform in Bombay to voice their grievances and present a united front to safeguard their rights. The birth of the Federation of Piecegoods and Yarn Merchants' Associations of India in January 1944 is for the textile trade and industry a historic event, full of significance and vast possibilities. One hundred and five associations of textile dealers from all provinces of India have joined the Federation. One cannot deny the fact that the Indian textile trade has organized on an appreciable scale.

Unfortunately, there doesn't seem to be necessary co-ordination and co-operation between the representatives of the industry and those of the trade. If the Indian textile industry is to retain the position it has attained now, both the industrialists and the representatives of the trade must put their heads together and form a representative body to plan post-war distribution of the Indian textile production. The formation of BETRO, the British Export Trade Research Organization, is a pointer to our industrialists and representatives of trade in this direction.

Why Such Organization ?

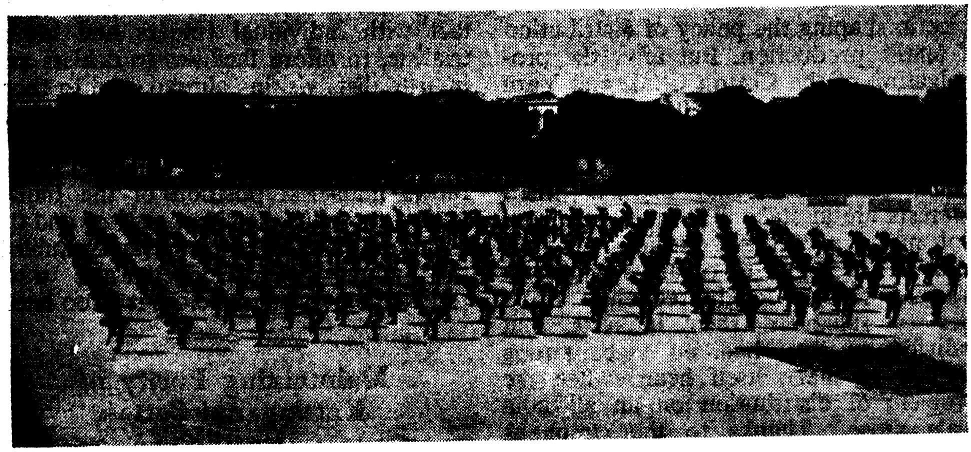
To reconstruct the trade and to meet the heavy demands of home and overseas markets, to conduct market and consumer research in all parts of this country and the world, to maintain permanent intelligence service in every overseas country, to establish close contact with individual traders and industrialists, to afford facilities to dealers and industrialists visiting abroad, and to those visiting this country from abroad, the need for an all-India organization is a pressing necessity. In the interests of the future industrial position of the Indian nation, the millowners' associations and the Federation must co-operate and establish the Indian textile industry and trade research organization before it is too late.

Maintaining Purity of Karunganni Cotton

THE Director of Agriculture, Madras, in the course of a Press Note, says:—

The growing of *pulichai* cotton in the districts of Madura, Ramnad and Tinnevelly has pulled down the quality of the superior Karunganni strains of cotton produced in these districts. In order to maintain the quality and reputation of the local Karunganni and other superior types of cotton, Government enforced the Cotton Control Act in 1932 under which the cultivation of *pulichai* cotton, mixing of *pulichai* cotton with any other kind of cotton, possession or use of or trade in, *pulichai* cotton, are all offences punishable with fine.

" In spite of the enforcement of the Act for several years, the incidence of *pulichai* cotton in these districts still continued to be high with the result that superior cotton raised in the tract failed to fetch the prices they ought to either owing to seed admixture during the sowing period, with the inferior *pulichai* variety or to filling up the blanks in badly germinated fields with the seeds of the latter. As *pulichai* cotton seed is being mainly maintained in the area by import of cotton seed from outside the province, ostensibly for cattle food purposes, a notification was issued under the Cotton Transport Act in June, 1943 prohibiting the import of cotton seed into the area south of the Vaigai River except under licence. Under this notification importation was permitted without licence during the non-sowing period. But since experience has shown that even the seeds imported for cattle food purpose find their way into the field, it is now found necessary to extend the period of prohibition on the import of seed throughout the year, except under licence.



"Keep Fit" could well be the motto of this energetic batch of men who are doing their early morning setting-up exercises at one of the mills in South India. Taking daily exercise keeps them fit, supple, and eager for the day's work. Most of them look forward to their P. T. classes.

The Industrial Worker in India—4

Recreation and Physical Culture

BY LALITA KUMARAPPA, B.SC. (*Cornell University, U.S.A.*)

(*Specially Contributed*)

THIS article is the fourth of a series on benefits industry is conferring on its workers to-day. In the three foregoing articles the author has dealt with (1) the care of industrial workers' children while their parents are on duty at the factory or mill, (2) maternity care and medical service, and (3) the problems of housing and sanitation which confront business magnates keen on improving the lot of the hard-worked but poorly paid mill-hand. As I have already mentioned, most of those working in factories to-day are villagers who have migrated to towns and cities in search of employment to fill their empty stomachs. So they are really folk who are used to living close to the soil. They love the sun, wind, and rain, and adore green fields, with the tender young shoots waving gently in the breeze, with the passion of the true peasant. The large shady trees beckon to them invitingly when they are tired. Can you then imagine their feelings of pent-up frustration when they leave all this to be huddled together in a factory for hours on end with nothing except machines to look at, and surrounded by the hustle, bustle, and noise prevalent in factories? This unaccustomed life subjects them to great nervous strain which is bad for their mental and physical health in the long run. And this is not all of the pitiful tale. After hours these same employees have to return to miserable hovels and stay there till the next dawn breaks, and compels them to go through the same depressing routine once again.

Some of India's more progressive industrialists are doing much towards ameliorating the pathetic condition of their workers. Besides offering them higher wages, medical care when they are ill, and also building model dwellings for them to live in, it is *very important* to supervise their *leisure time activities*, and see that they get some recreation—both for their bodies and minds—if they are to keep fit, alert, and fresh for the next day's work. The old Latin saying, "A healthy mind in a healthy body" is quite apt. We, educated people of to-day, fully realize the truth of it, for mental and physical well-being are so closely inter-related that you cannot have the one without the other.

In some mills and factories, the Welfare Officer also supervises games and sports, while in others there is a special Director of Physical Culture and Athletics—as for instance, in the Buckingham and Carnatic Mills at Madras. But regardless of who supervises the sports and social life of the place, it is a good idea to have a committee composed of the workers themselves under him to organize, run and manage such activities.

Games and Dramatic Clubs

Games and dramatic clubs should be open to all employees, whatever their position in the plant, if they are to be really successful. Thus we get a chance to break down communal differences, class and wage distinctions, and snobbery, dislike, and jealousy so rampant in industrial life and so destructive to human understanding and appreciation of other people. With this breakdown comes a widening of understanding and a tolerant attitude towards others, their way of thinking, and their mode of life. An increase of fellowship also follows, bringing with it a chance to realize the capacities of those who, because their occupations have been different, have hitherto been little understood. Thus we get scope for some who uptil now have had no chance to express themselves, and thus we also realize—most vividly—that everyone, no matter how humble, has something to contribute for the good of the whole. The various clubs will have characteristics of their own, made up of the individual traits of members belonging to them.

The difference between a club run for a small clique of good players and one in which an effort is made to imbue every member with the club spirit, will be learnt slowly, and probably only by failure in the early stages, but it will be all the more effective on that account. Often, the brighter and more talented members of the club will be called upon to suppress and even sacrifice their desire to excel now and again in order to give the not-so-talented ones a chance.

Eleanor T. Kelly says that "apart from the development of the invaluable team spirit—the foundation of all true co-operation—games' clubs tend to restore our faith in human nature. If we know how to play the game ourselves we assume that other people do so too, and we

The members of the Dramatic Society (Buckingham and Carnatic Mills, Madras) shown in a scene from "Rajabhakti." Everyone is having a thoroughly pleasant time in a most harmless fashion and the spectators also enjoy seeing the show put on by their co-workers.

Frequent competitions are held among groups of workers, and even inter-mill sports. This photograph was taken at one of the Cawnpore mills. Here we see a volley-ball game as well as badminton and another game in progress.

reason from this that it is possible to play the game over other things. To have faith in a man on the sports fields helps us to have faith in him when it comes to a question of business. Besides the development of qualities such as loyalty, self-sacrifice, and service, an important feature will be the more technical education involved in the running of the finances of the club. There will also arise continual problems to be solved in connection with the upkeep of the grounds, equipment, etc. Such experiences as these are undoubtedly of no little educational value."

The Elgin Mills, the Delhi Cloth Mills, the Buckingham and Carnatic Mills, and several in Bombay and elsewhere, realizing that adequate opportunity for wholesome recreation is desirable for all workers, have established well-fitted gymnasiums for the men employees and badminton courts for the women workers, as well as playgrounds for the children. The latter have shutes, swings, seesaws, sand-pits and so forth—dear to the hearts of all youngsters. Some plants have even gone to the length of providing a nice swimming pool for their employees. The enthusiastic reception accorded these facilities and their constant use by the workers is proof enough that a much-needed want was being satisfied in a healthy fashion. While this is encouraging, the movement for recreation in industry will, we hope, become more widespread and those who have not yet organized recreation will follow the leadership set by these more progressive concerns.

However, Games Directors have found from experience that it is unwise to just "dump" a club or society on the workers because you think they will like it, or that it will be good for them. First, put out a few tentative "feelers" to find out whether they would like a dramatic club, or a glee club, or a current events programme, and then, if the answer is "yes" help them to organize and run it.

Assembly Hall

I think the employees would appreciate it very much if they could bring their friends once a week or once a fortnight to the clubs, or to shows. If there is a large assembly hall the management could permit private gatherings or wedding parties to be held in it with special permission given for the occasion, and with the definite understanding that they will not dirty or damage the place. This privilege would be greatly valued by our millhands who have such small homes that entertaining in them becomes a problem. So they have no alternative but to go out to public Irani shops, or liquor booths, to meet their cronies for a chat, and in this manner very often start on the downward path, as many of these places are undesirable, and usually dens of vice and immorality. Thus are homes broken up and much needless unhappiness caused to family members of those who fall into evil ways.

For indoor recreation it would be a good idea if some of the larger industrial concerns could arrange to possess a silver screen, a cine camera and a projector. The employees would get much pleasure as well as useful instruction given in an interesting manner. With the help of leading film companies, movies could be shown once a fortnight. Then they could also be taught the principles of personal and civic hygiene, precautions to be taken against malaria, cholera, typhoid, etc.—all through this visual means of imparting knowledge. Thus, they not only derive much joy but also gather useful information for future conduct. Then sometimes films can be made of dramas, competitions, prize distributions and so forth. When shown to the workers they will feel vastly elated at seeing themselves on the screen. It will also be an incentive for them to do well and shine in the various fields of endeavour in order that they may have the honour of taking part in these films made in the plant.

To-day women claim equality with men in most fields of human endeavour, and sport is not excepted. Here we see women employed by the Elgin Mills, Cawnpore, having a game of badminton. It is encouraging to note the progress which Indian women are making in this direction.

Library

Every industrial concern should have a library of its own with books on various subjects (in the major languages). Some of the more intellectually inclined of the workers will spend part of their leisure there—perhaps keeping up with world affairs, or learning a little more about their special jobs, or again studying up on their particular hobbies. The librarian-in-charge should show the employees how to make proper use of the library in order to derive the maximum benefit from it. They should be encouraged to read and ask questions if they are in doubt, and should not feel ashamed to ask for guidance if they need it. The library, while it is a useful adjunct as an educational agency, may also be used thus for mental recreation and stimulation.

The Americans believe that a building should be in constant use—that is, during the major part of the 24 hours of the day, and that only then will the building be of the greatest service and justify the expenditure entailed in its construction. This is an excellent idea which we would do well to follow. How many buildings in this country are closed up for a good part of each day, and what a waste of space which could profitably be used by those in need. For example, the school house in the industrial plant should not be locked up when the children go home. Classes for adults could be held in it during the evening, or meetings, debates, and talks could be given there. Or again, tables could be set up for indoor games. Many other buildings which are used in an official capacity for part of the day could be reconverted with little difficulty and could be utilized for recreational purposes in a similar manner, instead of remaining merely closed up when not in use.

The photographs illustrating this article show industrial workers taking part in various recreational activities, and enjoying themselves thoroughly while doing so. They are also in better health than those who take no form of physical exercise, or do not indulge in games and sports.

Among the industrial workers of the progressive countries of the world our mill and factory-hands are perhaps the worst physically. Their low vitality leaves them prey to tuberculosis and other devitalizing diseases. Naturally, their expectation of life is also very low. Further, there are hardly any recreational facilities provided by the State or by private or public bodies for them. Whether we look at it from the point of view of national welfare, or from the selfish point of view of the industrialist who is out for profit, recreational facilities for workers are desirable as they tend to increase the efficiency of the workers as well as raise the standard of health and promote their happiness.

Science in War-time England and America

A Talk Given at the Rotary Club of Bombay

By Dr. NAZIR AHMAD, O.B.E., Ph.D., F.Inst.P.

IN June last Dr. Nazir Ahmad, who was a member of the Indian Scientific Mission which visited England and America recently, gave a talk to the Rotary Club of Bombay on the progress of science in those countries during the war. He traced the circumstances in which the Mission was appointed and proceeded as follows:—

Science in the British Universities

"I should like to tell you something about the progress of science in war-time England and America. It is customary, though sometimes rather difficult, to make a distinction between pure and applied science. But, in the present case, such a distinction would be distinctly useful. So far as pure or academic science is concerned, we found that it was practically at a standstill in the leading British universities such as Cambridge, Oxford, Edinburgh, Glasgow, London, Manchester, Leeds, etc., which were visited by us. Most of the teachers and boys in these universities had joined the armed forces or were working on special war problems of an applied character. In addition to these laboratories, such problems were being pursued in numerous other research laboratories either belonging to the Government departments or to the industrial organizations. We were privileged to see many of these laboratories, and the work in progress in them was shown to us without any reservation. This was true even of secret researches of a highly confidential character which had direct bearing upon military problems. It was a case of confidence begetting confidence, and the trust reposed in us was duly appreciated and honoured by us. It was rather amusing to see the transformation that had been brought about by the war in some of the older universities in regard to the type of problems which are being tackled at their laboratories. For example, in my old University of Cambridge, which for many years had been the home of work on nuclear physics, investigations were now in progress either on the strength and fatigue of materials required in the construction of aeroplanes and other engines of war, on the dehydration of foods and preparation of food packets for the defence forces, on the identification of fungi and bacteria which attack and destroy army stores, especially in the tropical climates, etc. Incidentally, I may mention that, when we visited the Cold Storage Laboratory at Cambridge, we were given a delicious lunch in which every item on the menu except the beer was prepared on the spot from dehydrated food. This change in the nature of problems tackled at the university laboratories was typical. Everywhere problems of an academic character, involving long-range research, were put aside for normal times, while the more practical problems which had a direct bearing on the war effort, were being pursued with great vigour and diligence. It must, however, be stated that in the pursuit of these problems the fundamental aspects were not ignored. On the other hand, the view was often expressed that the most direct approach to a practical problem was often the fundamental approach.

Role of Scientists in the War Effort

"A large number of scientists, engaged before the war on fundamental problems in the British Universities were requisitioned for war problems and were either attached to the army, navy or air force headquarters or were given facilities in the laboratories belonging to the Government Departments. It came as a surprise to many people to see how easily and quickly these scientists, who had spent most of their lives on problems of an abstruse nature, could adjust themselves to the totally different problems created by the war. They applied their fundamental knowledge and keen minds to the solution of these difficult problems. When the detailed history of this war comes to be written, names of men like Blackett, Appleton, Chadwick, Mott and others will shine like stars for the great service they rendered to England in her time of need, and it will be realized that their contribution to victory, though less ostentatious, was in no way inferior to that of the other sections of society, not excluding the armed forces. England was very wise in mobilizing to the fullest extent her scientific talent at a critical time and entrusting to it the solution of scientific and technical problems, and after seeing with our own eyes the splendid work done by the scientists, we could not help the sad feeling that if a similar outlook and procedure had been adopted in India, many of the problems, for which we had to await solution from outside, could have been solved with the help of the talent available in the country. I cannot but make the melancholy observation that in this country, with a few exceptions, the scientific laboratories, especially those belonging to the universities, were allowed to languish in an atmosphere of neglect, and that in spite of the proof to the contrary given by the British scientists, the scientists here are generally regarded as theoreticians, who may not be entrusted with practical problems.

Co-operative Research in England

"Apart from the scientific laboratories belonging to the universities, the laboratories of the Research Associations have played a most important part in war-time scientific research in England. These laboratories form a special feature of the British scientific effort, and deserve special mention as they may serve as models for some of the research laboratories which may be established in India. They are run on co-operative basis by the various industrial interests such as electrical manufacturers, leather manufacturers, non-ferrous metal workers, automobile manufacturers, etc., who have organized themselves into associations. The members of each association contribute from half to two-thirds of the total expenditure, while the Government, through the Department of Scientific and Industrial Research, provides the balance. Each laboratory is managed by a small committee on which the Association and the Department of Scientific and Industrial Research are represented, and the expenditure on administration is kept down to a minimum, while the bulk of the total budget is spent upon research. We were fortunate in visiting several of these laboratories, of which there are 28 in all. Before the war these laboratories were devoted to the peace-time needs of their respective industries such as those relating to the development of new processes and products, better utilization of raw materials, lowering of costs of manufacture, etc., but during the war they have been harnessed almost entirely to the solution of war problems facing each industry. In the solution of these problems they have discovered many new processes and products, some of which were shown to us, which will undoubtedly play an important part and find good markets in the post-war world. This is especially true of the chemical industries including the dyestuff industry, the electrical industries, the plastic industry and the textile industries. In regard to the latter special mention must be made of the Shirley Institute which had grown very considerably since I visited it last in 1934; and, besides its fundamental work, had developed several new processes and methods, the Fine Cotton Spinners Association's Laboratory and the Woollen Research Institute in which I saw many beautiful and attractive finishes including the new non-shrinkable fabrics.

Research for Social Needs

"In addition to these laboratories, which serve the needs of different industries, there are others maintained by the Government which are devoted to problems relating to public utility services. Among them the first place is taken by the National Physical Laboratory, which maintains the fundamental standards and lays down specifications for the commercial and industrial standards. Then there are the Water Pollution Research Laboratory, the Road Research Laboratory, the Forest Products Research Laboratory, etc. We visited several of them, and were deeply impressed by the quality of the work done in them. In the Water Pollution Research Laboratory a new method has been evolved for purifying any type of water so as to make it fit for human or industrial consumption.

Research by Industrial Organizations

"Some of the large industrial concerns, besides taking advantage of the laboratories maintained by the Government or the Research Associations, have their own private laboratories in which hundreds of scientists are engaged in solving their specific problems. The great organization of the Imperial Chemical Industries not only entertained us lavishly and took us round their principal factories, but also showed us their well-equipped research laboratories in which work in such diverse fields as fertilizers, heavy chemicals, dyestuffs, plastics, textile auxiliaries and finishes, etc., is being pursued with great vigour and thoroughness. I was specially struck with what I saw in the plastics section by the new materials which have been developed during the last few years and the numerous uses, relating to our everyday life, to which they can be put with the greatest ease. They are going to revolutionize the world and bring about vast industrial and social changes so that it is almost certain that the future historians will refer to the twentieth century as the Plastics Age. Similarly, in the great engineering and shipbuilding concerns of the northern counties, we not only enjoyed the truly charming hospitality of the North, but also saw their laboratories with their fine record of metallurgical research. It must be stated here that though these laboratories are owned by private companies and their work is devoted mainly to their specific problems, yet the scientists working in them are given full liberty to pursue any fundamental line of research in which they are interested, as it is realized by the progressive industrialists that scientific research cannot flourish in an atmosphere of restraint, especially when controlled by men of petty minds and narrow vision. In India, with the exception of a few industrialists among whom the House of Tatas stands out prominently, others have not yet awakened to the necessity of attaching first class research laboratories to their concerns, and even when such laboratories exist, they are generally poorly housed, badly equipped and inadequately staffed. It is fatuous to expect good results under such conditions.

Expansion of Research Laboratories in England

" Since we had visited some of these laboratories before, we were able to see that, during the interval between our visits, many of them had expanded very considerably. Even in those cases where, owing to the rigorous conditions imposed by the war, development was held up during the last five years, we found that blue prints of expansion were ready, and that it had been decided to construct new buildings and equip them with additional equipment as soon as possible. In India the tendency unfortunately exists in certain quarters to regard the work as completed after establishing a laboratory, and to forget about its organic growth and development.

Outstanding Results of Research

" It may be interesting to mention at least one important result of war-time research in England. The work done in England on radio location, resulting in the development of the so-called Radar sets, which we were privileged to see in full operation, has been of an outstanding nature, and only when the confidential history of this war is written, the great part played by it in ensuring Allied victory will be fully realized. The radio location, which must be regarded as one of the greatest inventions of all times, has great possibilities in peace-time.

Status of British Scientists

" Before I leave England I must say a few words about the present status of scientists in England. We had the privilege of attending a meeting of the Colonial Research and Development Committee under the chairmanship of the Lord President of the Council. It came as a pleasant surprise for us to see that the scientist members of the Committee played a very effective part in its deliberations, and we were told that this is a common feature of present-day England, in which the scientists were being associated, to an ever-increasing extent, with all matters relating to the development of national and Empire resources. The opinion was generally held that science had at last come into its own, and that henceforth the scientists would be called upon to collaborate, on equal terms, in all matters relating to public welfare. I could not help contrasting this attitude with the one which so far has prevailed in India, where, in spite of the lip service rendered to science, the scientist is often treated as the boy in the back room, who is sometimes patted on the back, more often scolded for imaginary sins of omission and commission, but is never allowed to exercise any direct control over matters of policy or administration.

Research in American Universities

"The trip from England to America provided us with many observations on points of contrast and similarity in regard to scientific research in the two countries. We visited numerous universities, Government research laboratories, industrial research laboratories and laboratories maintained by large industrial concerns. The universities in U.S.A., unlike those in Great Britain, are not depleted to the same extent of their science teachers and students; and, therefore, the study of academic science is still being carried on, though perhaps on a reduced scale. Even in a place like the California Institute of Technology, where many important war investigations are under way, the construction of the 200-inch telescope has not been suspended. This is largely due to relatively much greater man-power available in America, which has permitted the raising of perhaps the largest army in the world with the retention of the peace-time pursuits to an appreciable extent. However, many of the science laboratories, belonging to the universities and colleges, are engaged upon the solution of war problems which were being pursued with characteristic American zeal and vigour. I had occasion to see the same type of problem being tackled in more than one place, and was informed that it was due to two reasons. In the first place, it was regarded as a foolish policy to put all the eggs in one basket, so that if the man to whom a problem was exclusively entrusted made a mistake, the correct solution would not be known for a long time. Secondly, it was realized that two or more minds, attacking the same problem from different angles, would be far more satisfactory than a single person whose mind may work in a narrow groove. These points of view should be carefully considered by those people in India who, on the ground of avoiding duplication, sometimes unconsciously hamper scientific progress.

Co-operative and Industrial Research in U.S.A.

"The co-operative industrial research laboratories are organized somewhat differently in U.S.A. from those in England. The various industries have not generally formed themselves into associations and do not maintain laboratories as such, but they have, at their disposal, very well equipped laboratories, such as the Mellon Institute, the Armour Foundation Research Laboratories, etc., to which they can take their problems for investigation. They are expected to pay for the staff engaged on their particular items of research, for the overhead charges and for any special equipment required for the work. Some of the investigations may require only one or two men, others may need a team of 20 men; some may be completed within one or two years, others may go on for 10 or 15 years. It must be stated, to the credit of the American industrialists, that they defray the cost of these researches, sometimes running into hundreds of thousands of dollars, with the greatest of cheerfulness and good grace. The amount spent on research in these institutions may be gauged from the fact that the annual budget of the Mellon Institute or the Armour Research Foundation is in the neighbourhood of 2 million dollars. These laboratories do not take any grants from the Government, but are maintained entirely from the fees collected from the industrialists.

"Apart from these laboratories, to whom any industrialist may refer his problem, the large industrial concerns such as the Westinghouse Electric Co., the Bell Telephone Co., the General Electric Co., the American Cyanimide Co., the American Viscose Co., etc., maintain their own laboratories, which are adequately staffed and very well equipped indeed. I had the privilege of visiting many of these laboratories; and, though the war problems occupied a good deal of their attention at the time, I could plainly see the great force for industrial development which these laboratories constitute and the way in which they have helped and will help the American industry to take a leading place and win the world markets through sheer variety, attractiveness and quality of its products. Their expenditure, in each case, runs into millions of dollars a year, but like the laboratories maintained on co-operative basis, they do not take any grant from the Government.

U.S.A. Government Research Activities

"The research activities of the Government of the U.S.A. are principally in the fields of agriculture, utilization of agricultural crops, development of mineral and water resources, land reclamation and prevention of soil erosion, etc., i.e., those aspects on which the welfare of the nation as a whole depends. For this purpose they have established some very fine laboratories, which are scattered all over the country, so that no part of the country may remain backward in this respect. I had occasion to visit several of these laboratories among which a leading place is occupied by the National Bureau of Standards which corresponds to the National Physical Laboratory of England, but has a somewhat wider scope of work. In regard to the industrial utilization of agricultural crops, the Government of the U.S.A. has established four large regional laboratories, each at a cost of 2 million dollars with an annual budget of nearly 1 million dollars, in the East, West, North and South, which deal with the principal crops of each region. In view of the large size of our country, which is comparable to that of the U.S.A., and the wide variety of crops, this model is far better suited to our needs than a central laboratory, which cannot possibly serve the interests of the whole country. Similarly, the hydrological laboratories, the mineralogical laboratories, the fuel research stations, etc., are scattered all over the country, and placed conveniently near the main producing areas. The work on improvement of crops and land reclamation is co-ordinated by the Federal Bureaus, but the actual researches are carried out in a network of field stations and laboratories spread all over the States. In fact, while the industry in the U.S.A. follows the precept of 'God helps those who help themselves' and accepts very little direct grant from the Government for industrial research, the Government spends vast amounts of money on research pertaining to agriculture, soil preservation, land reclamation, development of water resources, etc. When we remember that not even 40 per cent. of the people in the U.S.A. are engaged in agriculture as against over 80 per cent. in India, the small amounts spent here for the betterment of agriculture stand out in sharp contrast.

"No account of the U.S.A. Government activity would be complete without a reference, however brief, to the Tennessee Valley, which, in the course of less than a decade, has been turned from a backward area into a flourishing agricultural and industrial region through the application, on a large scale, of the results of scientific progress. It stands out as a monumental achievement of the American people, bearing eloquent testimony to their grandeur of conception, untiring zeal and meticulous attention to detail. There are many valleys in India which can be developed like the Tennessee Valley, bringing prosperity to millions of people if only we thought in big terms and applied our shoulders to the wheel. Another noteworthy example of rapid development during the war seen by us was the factory of Research Enterprises Ltd. in Canada. We were told that the first sod in the land was turned only four years ago, and to-day it employs hundreds of workers turning out radio sets, optical glass, radio tubes, etc., by the thousand. Their motto, which is 'Difficulties we overcome immediately, Impossibilities may take some time,' is well worth emulation by all those who are sincerely interested in the development of a country.

Size and Equipment of the Research Laboratories in U.S.A.

"I have already hinted at the size and equipment of the American laboratories, but this feature deserves more than a passing reference. Whether the laboratories belonged to the Government or industrialists or were run on co-operative basis, we were deeply impressed by their magnificent size, excellent equipment and large staff. The annual budget of these laboratories runs into two, three and even five million dollars, and some of them are so completely equipped that they could manufacture anything on the spot from a small accessory to a large machine. In the words of the President of the Pittsburgh University, only the best was good enough for a home of learning, and neither money nor thought nor endeavour had been spared to provide the best to the research workers. Incidentally, an Indian scientist, Dr. Siddhu, who has done excellent work on X-rays in this University, is now Associate Professor of Physics there. The magnificence of these laboratories and their munificent scale of expenditure at first stupefied me, until it was explained to me that the Americans regarded expenditure on research as the best investment for industrial development. This view is amply corroborated by the tremendous advance which America has made in the short space of thirty years since the last war. This liberal attitude, which has borne rich fruit, should serve as an eye-opener to those in this country who still think that research can thrive in dingy surroundings with out-of-date equipment and a few poorly paid workers.

" Another feature of American research which greatly impressed me was the fact that in almost all the laboratories visited by me a team of workers was engaged on each investigation, each member of the team bringing his special knowledge to it and the whole team viewing it from different angles. Thus, in a building research laboratory, where an investigation was in progress on the setting properties of concrete, a chemist, a physicist, a microscopist, an engineer, a mathematician, etc., all combined to work on this problem. It is true that a large number of workers and up-to-date equipment requires money, but, in the long run from the point of results achieved, it is found to be most economical; while paucity of staff and insufficiency of equipment are really false economy, which in the long run may prove to be the worst form of extravagance. The argument that America is able to spend all these sums on research because she is rich is really putting the cart before the horse. The wealth of a country lies in its human and natural resources, and America is to-day rich because she had the vision and the large-heartedness to spend money on research aimed at developing her resources. Any other country, like India, can become rich if she learns this lesson and follows this course which American experience has abundantly proved to be wise and profitable.

Some Recent Achievements

" Apart from the great advances made in the fundamental sciences, which are evident from the fact that no less than five Nobel Prizes went last year to America, the genius of the American scientists was especially noticeable in many automatic and labour-saving devices developed in the last few years, such as the mechanical cotton picker which does the work of forty men, the flame weed killer, the automatic knotter and reeler, etc. One of the most interesting developments is the new method of projecting television pictures, which will permit large-size pictures to be thrown on a screen. The work on plastics, including nylon, and on synthetic rubbers, has produced many new and attractive products, while the recent development of silicones, which may possess the suppleness of a jelly or the hardness of ebony, promises to yield even more wonderful objects of everyday use. The gyroscope and the photo-electric cell have been used with great effect, and I saw a gun-carriage which can absolutely hold its level on the roughest of roads. The wide range and attractiveness of many textile fabrics made from natural and synthetic fibres were truly remarkable. The full impact of all these discoveries and inventions will be realized only after the war when the factories will be able to put them into large-scale production and the normal means of world transport will be restored.

Status of American Scientists

" In America conditions are even better than in England and the scientists enjoy a status and prestige which must be the envy of their colleagues in the backward countries. In almost all the big industrial concerns which we visited, we found at least one scientist on the Board of Directors, while in several cases the President of the company was a scientist or an engineer. It was generally recognized that in the complex processes which constitute the basis of modern industrial production, only a scientist can fully appreciate and clearly understand its technical aspects; and, therefore, the presence of a scientist on the Board of Directors not only helps to establish a healthy liaison between research and development, but also gives direct and first-hand approach to methods and processes of manufacture, the better utilization of raw materials and the adaptation of finished products to new uses. They are also able to collect large sums of money from industrialists for establishing new research laboratories or expanding old ones. The great Massachusetts Institute of Technology, the California Institute of Technology, the Carnegie Institute, etc., owe their phenomenal rise and expansion principally to *the confidence and trust placed by the wealthy Americans in scientists like Dr. Millikan, Dr. Compton and others, and in view of this healthy attitude it is no* wonder that American science and technology have reached such eminence in the course of a few decades.

How Can These Lessons be Applied to India

"The question may be asked whether we in India can raise research to the level at which it flourishes in Great Britain and the United States of America, and apply its results for the development of our natural resources for improving the condition of the people. After seeing numerous research laboratories in Great Britain and the U.S.A., and meeting scores of scientists in these countries, my definite answer is "Yes." It would, however, be necessary for this purpose to expand the old research laboratories, to establish new ones, to equip them with up-to-date apparatus and to provide them with adequate staff and in this task both the Government and the industry should come forward and make substantial grants and donations. So far as the Government is concerned, we must have a network of field stations and demonstration farms scattered all over the country for the improvement of our crops, the study of soil erosion problems, land reclamation, effect of fertilizers, irrigation, rotation and other agricultural practices, and these investigations should be co-ordinated. We must have at least four large regional laboratories devoted to the better utilization of our agricultural crops. We must have several large laboratories engaged on researches related to the utilization of our forest products. We must establish large centres for the study of problems relating to nutrition, public health and medical relief, and for the improvement of public utilities such as civil aviation, radio, railways, roads, marine traffic, flood control, housing, etc. So far as the industrialists are concerned, they must organize themselves into associations and establish co-operative research laboratories and the large industrial houses should maintain their own research laboratories devoted to their specific problems. The problems of marketing have been sadly neglected and these should be investigated in a *scientific manner for home as well as foreign markets. Apart from the expenditure which would be required for this purpose, it would also be necessary to* create a proper atmosphere in which research may thrive and yield the maximum results. Several factors are needed to create this atmosphere. The research workers should be properly trained and there should be enough of them to enable a small team of workers to be put on each problem so that it can be viewed from different angles. They should be devoted to their work, and their devotion should be suitably rewarded by appreciation and encouragement. They should be paid sufficiently well to attract the best men in the country, and they should not be depressed by the feeling that having selected research as a career, they stand to lose permanently as compared with other professions and services. They should be given sufficient time and latitude to examine a problem in detail, and should not be expected to produce quick results. Even negative results should be regarded valuable as they eliminate certain possibilities. Above all, the direction of research should be in the hands of large-hearted men who should appreciate the value of research and are not always obsessed by its cost, who should have the requisite knowledge to make constructive suggestions and the imagination to adopt a positive rather than a negative attitude, who should believe in placing research in the vanguard rather than the rearguard of industry, and finally, who should possess the courage to apply its results to national problems.

Dollar Pool a Barrier to Trade?

Asserting that American exporters were entitled to "yell like stuck pigs" in protest, Mr. Celler, member of the House of Representatives, urged the New York Board of Trade to investigate immediately the British Sterling Dollar Pool and its "effect as a barrier to United States trade." He thought that if the pool continued, much American trade, particularly with India and South Africa, would be blocked and eventually closed.

India needs American goods, but England forces India to deal well-nigh exclusively in British goods—if it can get them. Britain has not the wherewithal to supply the goods needed by India. She thus plays the dog in the manger. She says to India: "We will not let you buy American goods and we have not the goods to supply you. Therefore, do without them."

Planned Industrial Development

Network of Research Organizations Proposed

Report of Research Planning Committee

THE setting up of a central research organization, to be called the National Research Council, authorized to initiate immediately a five-year programme of development of scientific and industrial research, is recommended by the Industrial Research Planning Committee in its report published on 11th August 1945. The plan envisages the building and equipping of a national chemical and a national physical laboratory, certain specialized research institutes, and all-round strengthening of the existing research organizations and the training of a sufficient research personnel by the award of scholarships tenable in India and abroad. A network of research laboratories particularly to deal with local problems is recommended to be set up in all the Provinces and major States.

The Committee recommends a block grant of Rs. 6 crores by the Central Government to meet the capital and recurring expenditure for the setting up of the research organization in the first five-year period and thereafter an annual grant of Rs. 1 crore for recurring expenditure and for expanding and carrying on the activities. A statutory cess (one anna per hundred rupees worth of industrial output) on industries (including railways) is proposed to be levied on the completion of the five-year programme. This will yield approximately Rs. 1 crore. To avoid undesirable disparities in burdens on industries, the Committee has recommended that if and when the cess is levied on industries in British India, Government should invite all Indian States to levy a corresponding cess on industries within their respective areas for use on research.

Among other recommendations made by the Committee are the setting up of a Grants Committee which will suggest a scheme of financial assistance to Indian universities and technical societies, a National Trust for Patents and a Board of Standards and Specifications.

The Industrial Research Planning Committee was appointed by the Council of Scientific and Industrial Research in 1944 to make a comprehensive survey of the existing facilities for scientific and industrial research in India and report on necessary measures of co-ordination, control, direction and development of such research by various agencies and also on other steps necessary for the planning of such research in post-war India. The personnel of the Committee was: Sir R. K. Shanmukham Chetty (Chairman), Dr. Sir Jnan Chandra Ghosh, Lt.-Col. S. S. Sokhey, Mr. Kasturbhai Lalbhai, Sir J. J. Ghandy, Prof. S. K. Mitra, Dr. K. A. Hamied, Prof. M. Qureshi, and Dr. Sir S. S. Bhatnagar (members).

Existing Organization

The Committee in its report says that the present research activity in India does not represent even the bare minimum whether judged by international standards or the actual requirements of the country in her present state of industrial development. The need for research is felt not only for facilitating an adjustment to post-war conditions but also for promoting the general cause of industrialization at a time which will be rendered much more difficult by the forces of international competition. The capacity of Indian industry to withstand international competition will depend materially on its vision and readiness to implement the latest results of research in a continual effort for improving its productive efficiency by economy in the use of raw materials, utilization of by-products, reduced power cost and so on. Research will also play a decisive part in the development of new industries for which the opportunities remain imperfectly explored.

Industrial research, the Committee says, is still in its infancy. Besides the lack of an effective link between our principal research institutions and the industrial interests concerned, a further obstacle to the creation of a suitable research atmosphere has been created by the fact that while industry constitutes a provincial subject, it is beyond the resources of most of the Provinces to

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build up adequate research organizations for catering to the needs of local industries, The institutes set up by the Government of India have remained much too centralized for meeting the various regional needs. Moreover, industry, with some rare exceptions, has not become research-minded. Nor is there an effective liaison between industry and research organization. There is also lack of inter-departmental co-ordination.

Recommendations

If scientific and industrial research is to make any headway in India in the immediate future, the Committee feels that Government must take the initiative in setting up a suitable machinery for the development of research along sound lines, strengthen the science departments of universities and existing research institutions and bring about an effective co-ordination amongst all the institutions. For stimulating and directing scientific and industrial research on a planned and comprehensive basis, the Committee recommends that the Government of India should forthwith set up a central research organization to be called the National Research Council. This organization should consist of representatives of scientists, universities, industry, labour and administration. The Hon'ble Member in charge of Planning and Development should be its ex-officio President. The Council, which should be an autonomous body, should have a total membership of 60 made up of 20 scientists elected by the universities and recognized scientific associations, 15 members elected by recognized chambers of commerce and associations of manufacturers, five members elected by recognized trade unions and other labour organizations, and 20 members nominated by the Government of India of whom not more than 8 may be official. Of these two should represent the railway administration.

The functions of the Council will be as follows:—

(i) To organize and maintain national laboratories.

(ii) To establish and maintain specialized research institutes.

(iii) To stimulate pure and applied research in universities by grants-in-aid and by the institution of scholarships and fellowships.

(iv) To provide for the immediate problem of the dearth of technical and research personnel by the inauguration of scholarships available in India and abroad.

(v) To stimulate and encourage research activities by industry.

(vi) To co-ordinate research activities of all the existing research institutes and departments of Government and undertake planning of research programmes on a comprehensive basis.

(vii) To function as a National Trust for Patents.

(viii) To set up a Board of Standards and Specifications.

(ix) To function as a Clearing House, encourage deserving scientific and technical societies and foster the growth of new ones in appropriate lines.

Research Board

A small executive body, to be called the Research Board, will be responsible for the administration of the work of the Council. The Board will be in charge of all the research laboratories and institutions set up by the National Council and directors of these institutions will be under the control of the Board. It will also maintain the closest contact with directors of laboratories engaged in industrial research under the administration of the other departments of the Central Government. The Board will prepare comprehensive plans of research programmes and will take an active part in the establishment of research institutions by industries and distribute grants-in-aid to universities and other approved institutions with the help of the Grants Committee from funds specially allotted for the purpose.

The Committee recommends that the Council, given a bulk grant of Rs. 6 crores spread over five years, should make and carry out (i) the building and equipment of national chemical and physical laboratories; (ii) the building and equipment of certain specialized research institutes; (iii) giving grants-in-aid to universities for strengthening their research organization; and (iv) training a sufficient research personnel by the award of scholarships tenable in India and abroad.

Specialized Institutes

The establishment of a National Chemical and a National Physical Laboratory is recommended at an estimated cost of Rs. 40 lakhs each. It is further recommended that in the absence of industrial research associations in India (except for jute and tea) it is necessary for the State to take the initiative for the establishment of a number of specialized laboratories for fulfilling the object. Nine new specialized institutes are recommended with an indication of the order of priority as follows:—Institute of Food Technology; Metallurgical Institute; Fuel Research Institute; Glass and Silicate Research Institute; Oils and Paints Institute; Buildings and Roads Institute; Leather and Tanning Institute; Industrial Fermentation Institute and Electro-Chemical Institute.

These specialized research institutes will deal with problems of basic and specific research relating to their respective spheres. Provincial and State Research Councils may send problems for investigations to these institutes and it will be open to individual manufacturers to refer specific problems of immediate interest to industry to such laboratories on payment of scheduled fees or by the establishment of fellowships.

Grants to Universities

The Committee considers that universities constitute the foundation of all research and suggests the strengthening of scientific teaching and research work in Indian universities. As an essential part of the five-year plan, the Committee recommends that the National Research Council should make substantial grants for strengthening the scientific departments of the universities. For this purpose the Grants Committee should make a survey of science and research departments of all the Indian universities and recommend to the National Council a scheme of financial assistance to the latter. Out of the bulk grant of Rs. 6 crores the Committee says a sum of about Rs. 2 crores should be set aside for giving grants-in-aid to the 19 universities. Further, adequate engineering research sections should be built up and maintained in all the engineering colleges. Teachers in such colleges should be in contact with the engineering industries.

To man the various laboratories proposed to be set up and to keep alive the research work in the country the Committee recommends that 700 research workers should be trained in five years involving an estimated total expenditure of about Rs. 50 lakhs: Rs. 27 lakhs for foreign scholarships and Rs. 23 lakhs for Indian scholarships. Industries should be encouraged to set up their own research associations on corporate basis by exemption of research expenditure of firms from income-tax assessment.

A network of corresponding research organizations should be set up in Provinces and major States.

National Trust of Patents

A suitable method, the Committee recommends, for the exploitation of patents in respect of inventions made at either the national laboratories or universities and other research organizations should be evolved. A National Trust of Patents should be set up for the purpose of holding and exploiting all patents resulting from research financed by Government and those dedicated by individual scientists and by institutions, supported either by public funds or private endowments.

The setting up of a Board of Standards for drawing up Indian standard specifications and the establishment of a technological institute on the lines of M.I.T. are recommended.

The Committee emphasizes that research can yield its best results only when it is backed by a comprehensive industrial plan. This will not only inspire enthusiasm among research workers but will serve the practical purpose of indicating an order of priority in the various lines of investigation. The Committee accordingly recommends that the National Research Council must work in close co-operation with the department of industrial planning so that industry and research will each stimulate the other.

The Committee further emphasizes the organic relationship between the different categories of research, viz., agricultural, medical and industrial and welcomes the constitution of the Scientific Consultative Committee in the Department of Planning and Development as a body expected to secure the necessary co-ordination at a high level. The Committee, however, considers it necessary to examine the possibility of bringing all the research activities of the various Government departments under the administrative control of the Member for Planning and Development.

The Molecular Structure and Properties of Textile Fibres

Protein Fibres

Mr. J. P. DeSouza, M.Sc. (Bom.), who has conributed this interesting article, graduated in 1938 *from St. Xavier's College, Bombay, in Bacteriology and Chemistry, then undertook research work in the Department of Chemical Technology, University of Bombay, and was awarded the M.Sc. degree in* 1941 *for his thesis on "Emulsions." He worked as Chemist in the Calico Mills of Ahmedabad and gained valuable experience of chemical problems in the processing of textiles and of analysis and testing of textiles and of their auxiliaries. Early in* 1944, *Mr. DeSouza undertook independent chemical manufacturing work, connected with the war, in Bombay and Delhi, and was for some time I.T.J. Special Correspondent at New Delhi. He is now interested in reverting to his pet subject Emulsions, of which he possesses expert knowledge, both theoretical and industrial, from the manufacturing angle.*

MOLECULES are the bricks in the structure of matter. It is generally believed that all textile fibres are composed of chain-molecules and that the fibre itself in its macro-structure is a reflection of its own micro-structure. This belief is based primarily on evidence from X-ray studies on fibres, for which we owe much to Astbury, Chibnall and co-workers, and in a preceding article (*cf. I.T.J.* July 1944, p. 395) we considered the molecular structure of the cellulose fibres from this angle.

Protein fibres, like cellulose, are natural fibres but are animal in origin. Wool and silk are natural protein fibres. Recent years have seen the synthesis of artificial animal and vegetable protein fibres made from protein material, such as casein and groundnut protein.

Proteins are basic components closely associated with life in all its manifestations. Although plants are mainly built up of other substances, proteins are of vital importance for all of them. The animal ultimately derives its protein substance from vegetable sources, from plants, seeds and seed-cakes, fed as fodder. These are hydrolysed by enzymes into amino-acids in the digestive processes. The amino-acids go into the bloodstream and there a process of selection and reassembly takes place. Some of the units formed are utilized to satisfy energy requirements; others build up proteins required in the structure of the growing animal or form proteins to repair the wear and tear of essential parts of the body.

The bulk of the animal body, including the muscles, skin, hair, and part of the bones, consists of proteins. Proteins consist of the chemical elements : carbon, hydrogen, oxygen, nitrogen and usually sulphur. These elements build up the amino-acids which are linked together by the grouping—CO—NH—known as *the peptide linkage*. Several amino-acids linked together end to end form a long polypeptide chain. A bundle of such straight chains is obviously the simplest configuration that polypeptide chains can assume; nevertheless, only three instances of this have been found in nature, one being collagen, which is the principal protein of bones; the others are the fibroin of silk and the keratin of wool.

The keratin of wool is built up of a large number of amino-acids which makes the elucidation of its structure a difficult problem. Proteins are extraordinarily versatile substances and the secret of their versatility lies in their molecular architecture, that is, the way in which the molecules are arranged. In the case of wool, the arrangement appears to be in the form of a grid or ladder, which is folded or crumpled along its length. The folded chains give to wool fibres their most characteristic property—their elasticity. We can imagine the folded chain when subjected to an external pulling strain, elongating into a straight chain and reverting to its original folded condition when the strain is removed, almost in the same way as india-rubber does.

The first important difference between wool and silk is the lack of elasticity in the latter. An X-ray picture of the silk fibre closely resembles a wool fibre *when in the extended condition*. That is as far as resemblance between the two fibres goes, apart from the fact that they are both protein fibres.

You have all heard of the modern hairdresser's art of permanently setting ladies' hair in waves. They do it by the application of heat by electricity because when hair is heated excessively (but not directly) the elasticity of the molecular " springs " is destroyed and the hair becomes permanently set.

Crease-resistance may be defined as three-dimensional elasticity, because it requires an external strain in all dimensions to produce a crease in a fabric and likewise an elasticity to neutralize the effect of such a strain. Wool fibres are naturally most suited for the production of anti-crease fabrics, although modern chemists have successfully attempted to produce synthetic fibres having elastic properties as great if not greater than those exhibited by wool fibres.

X-ray evidence has definitely established that the molecular constitution and fibre properties of wool and silk are fundamentally different. Wool is characterized by its warmth, its elasticity, its felting properties and its reaction to moisture. Silk is noted for its strength, fine diameter, lustre and handle.

Natural silk as spun by the silk-worm consists of twin fibres of fibroin gummed together with sericin. The structure of completely degummed silk or fibroin has not yet been fully elucidated but on hydrolysis it gives three amino-acids—glycine, alamine and tyrosine—out of which the two former predominate.

An X-ray examination of natural silk indicates that the long thin crystallites of fibroin which lie roughly parallel to the long axis of the fibre are composed of bundles of fully extended polypeptide chains. Although the chemical constitution of fibroin is quite different from that of cellulose, yet they are both assembled on a similar molecular plan, and because of the extended state of the molecular chains they have comparatively little elasticity.

There is a close similarity between the way the silk-worm produces its thread and modern methods of artificial silk manufacture. The silk-worm prefabricates its polypeptide chains in soluble form in the silk gland and by pressing the fluid through the narrow opening of the spinnerets and precipitating the protein simultaneously, the silk-worm produces a fibre.

" Prolons "

The protein synthetic fibres are sometimes known as " prolons " to distinguish them from the synthetic " rayons " which are made from cellulose. By synthesizing amino-acids and joining them by peptide linkages, chemists have been able to build up chains of polypeptide molecules of very great length. The study of protein synthetic fibres has only just begun and many further developments may be expected in this field.

Enough has already been said to illustrate the importance of studies on fibres from the molecular angle, both in the case of vegetable as well as the animal fibres. Many of the curious and characteristic properties of cellulose, wool and silk have found an acceptable explanation on the basis of molecular studies. Such understanding will assuredly lead to greater, and maybe spectacular, developments in the field of synthetic fibres.

British Textile Machinery for India

PRAISE for the vast amount of well-planned research being conducted by British industries was expressed by Mr. A. D. Shroff, a member of the unofficial Indian Trade Mission. Mr. Shroff was not optimistic about the immediate prospects of British industry, but declared: "One thing definitely impressed me—the amount of research work carried on by the major industries in the United Kingdom. It creates a new hope for the re-establishment of Britain in its pre-war eminence as an industrial power."

" Particularly in respect to capital goods which are so urgently needed by India, it appears it would take from 18 months to two years before particular industries we are interested in will be in a position to meet even a part of India's requirements. Textile, and especially spinning machinery, seems to be in a rather disappointing position. I don't think India will be able to get machinery from Lancashire before the end of 1946 or the beginning of 1947."

Time-Honoured Method of Steaming Cocoons

Why Not Follow Other Methods?

By V. M. APPADHORAI MUDALIAR

Retired Assistant Superintendent of Sericulture, Mysore Government, and ex-Manager, The Kollegal Silk Filatures (Madras Service)

(Specially Contributed)

Mr. V. M. Appadhorai Mudaliar has been in the silk industry for nearly 38 years. For 28 years he was in the service of the Mysore Government who gave him opportunities for study and travel abroad. He retired in 1940 and has since been busy preparing monographs on sericulture and silk reeling technique. Recently he worked for some time as the Manager of the Kollegal Silk Filatures (Madras Government) under the guidance of Mr. R. Peychandu, Deputy Director of Textiles, Government of India. He is reported to have been to a considerable extent responsible for the improved quality of the silk that has since been distributed to the silk mills of India.

THE main object in conditioning cocoons before reeling is to prevent the chrysalis from undergoing its last metamorphosis and coming out as insect perfect—"moth." The moths prior to emergence, out of their temporary prisons (cocoons) make a hole at one end of the cocoon by emitting a kind of alkaline liquid contained in their aerial bladders at that particular end of the cocoon to soften the layers of silk and gently pave a way by setting aside the filaments all round with the aid of their thoracic legs.

The hole so made is neither too big nor too small, but just enough for the moths to extricate themselves without much struggle. Since the moths do not actually bite the filaments and cause damage to the continuity of the filament, the question arises as to why these pierced cocoons are not made use of in the silk reeling industry. The answer is very simple—"provided the cocoons are not pierced."

In the first processes connected with the silk reeling technique, cocoons will have to be cooked in boiling water for a couple of minutes for softening the gum (sericin) sticking on the layer of the filament and between layer and layer. Cooking facilitates loosening the filament. In this operation unpierced cocoons behave better, as they actually float on the surface of the water to enable the cooker to judge whether the cocoons have been properly cooked or not. Whereas the pierced cocoons, due to the holes, take in water easily to their full capacity and sink down to the bottom of the cooking basin instead of floating, it is not convenient to attend to proper cooking or the other process of brushing and preparation. (Preparation is nothing but gathering the true ends of the filaments in cocoons in a clean manner to facilitate reeling to the required denier.) For the above reasons pierced cocoons cannot be reeled like the ordinary ones. But scientists in Europe have not given up hope. They have devoted the best of their attention to solve the problem and their attempts have not met with any success so far.

In 1872, C. Le Doux tried experiments and his ingenious method to solve the problem of reeling pierced cocoons by substituting chrysalis inside the hole and covering the hole with India-rubber with a view to preventing the water from getting in and making the cocoons float in cooking basin. This experimenter very nearly succeeded on the first two points, but miserably failed in the remaining processes of brushing, preparation and reeling; hence this ingenious method was nothing but an outright defeat against nature. It is, therefore, out of the question to utilize pierced cocoons in the reeling industry.

As all of us are aware, science is rapidly advancing and the present world war is responsible for several wonderful inventions. Who knows there will not be a time when scientists may find a way out to solve this problem also!

Just at present the pierced cocoons are considered the best raw material for the manufacture of superior spun silk yarn. All the pierced cocoons which are the by-product obtained in the grainages are profitably utilized in the spun silk mills in addition to waste.

Methods of Steaming and Conditioning Cocoons

(1) Steaming methods. (2) Drying or conditioning cocoons by the radiation of sun's heat. (3) Drying or conditioning by hot air. (4) Several systems of hot air conditioning adopted in Italy and France such as Dubini and Kachel, Open hot air method, Prism rotation method and Pellegrino. (5) Killing the pupæ with chemicals such as sulphurous acid and carbon sulphide method. (6) Atmospheric pressure. (7) By freezing. (8) Asphyxiation.

Steaming of cocoons. The object of steaming the cocoons is to kill the chrysalis by means of acqueous vapour as well as to loosen the layer of silk in cocoons.

The raw cocoons are filled in perforated rectangular trays and these are arranged one above the other in a chamber constructed specially for this purpose. The dimensions of the steam chamber vary according to the quantity of the cocoons one would wish to stifle at a time. The steam is usually let from the boiler and, as it enters the chamber, it passes through the perforated pipes and comes out with force through the minute holes. To have a uniform stifling of cocoons, the temperature inside the closed chamber must not be below 85° C. and not more than 90° C. It is necessary to keep univoltine raw cocoons at this temperature for an hour and multivoltine cocoons for about 25 to 30 minutes. This depends on the quality of the cocoons. Due to certain risks the steaming method is not followed in any big filatures either in Italy or in France. Small reeling establishments reeling defective and double cocoons are resorting to steaming in a primitive way, because they cannot afford to invest heavy capital on boilers and the construction of special steam chambers. The appliances required for this crude method are a cylindrical vessel, a hearth, stand and trays for cocoons, hessian cloth or detachable planks for covering from all sides. In using planks for covering the stand, the top plank will have sufficient number of holes for the outlet of the aqueous vapour. The vessel with the water is kept boiling, the stand with cocoons is covered either with hessian cloth or with planks. The aqueous vapour from the vessel passes through the cocoons kept in the perforated trays. In the case of plank covering, enough spacing is given all round the stand and the top for the aqueous vapour to pass freely all over the cocoons. They also provide enough spacing in between the top of the vessel and the bottom tray. Since the temperature of the vapour will be high for the bottom tray and gradually diminish in other trays, this is adjusted in a proper way.

It is immaterial whether raw cocoons are treated in this primitive way or steamed on rational lines; the risks and damage caused to these cocoons are always great if they are not utilized in reeling early. Since steamed cocoons absorb moisture in addition to the moisture already contained in the chrysalis, it becomes very necessary to dry them if huge stocks have to be built up in filatures. This will have to be done either by exposing to the sun or drying in the shade by spreading the cocoons thinly and allowing them to dry. Whether the cocoons are univoltine or multivoltine, with the strong sun's heat it takes at least 18 days for univoltine cocoons and 9 days for multivoltine cocoons to have a satisfactory drying. Despite keeping the steamed cocoons thinly in stores the accumulation of moisture is inevitable on the spot where the cocoons rest for want of proper airing. The accumulation of moisture is all the greater during nights owing to the closure of all the windows and doors. During inclement weather conditions and the high percentage of humidity, the entire lot of cocoons will be moist and soft, with the result the cocoons will not be rigid for handling but soft to touch. These defects cannot be eliminated even if the room is kept warm with charcoal stoves, for the mere fact that the portion where the pupæ rests in the cocoon will have concentrated in itself all the moisture. The other disadvantage in either charcoal stove or other means in stores stocked with steamed cocoons is that this makeshift way of raising the temperature will only cause accumulation of more moisture at the base for want of sufficient airing where cocoons rest, and the evoporation of moisture contained in the stores as well as on the cocoons should necessarily go to bottom. Handling the cocoons on and off causes another disadvantage. To begin with, satisfactory handling becomes difficult, constant handling of moist cocoons spoils the quality of cocoons and the top layer becomes hard. Hard surface causes great trouble in cooking and brushing and getting at the true ends from the cocoons for preparation. The stagnation of this moisture freely favours the growth of moulds. The common moulds that attack steamed cocoons are *Penicillium glaucum* whose colour is greenish and the other mould is *Aspergillus* with a brownish tint.

Storing raw cocoons for a long period without sufficient drying is also dangerous as due to the filthy smell given out by the pupæ, rats, squirrels and insects are attracted, which causes havoc. It is impracticable to preserve steamed cocoons in good condition specially when the percentage of humidity is high. Costly cocoons preserved in this way become an easy victim to *Dermestes lardarious*. The damage caused to these cocoons is very great. The pest belongs to the family of *Coleotteri*, which is a deadly enemy to the chrysalis. The other families belonging to this category are (1) *Dermestes fritschii*, (2) *Dermestes vulpinus*, (3) *Attagenus piceus*, (4) *Attagenus pellio* (5) *Anthrenus verbasci*, (6) *Tenebrio molitor*, (7) *Trogosita mauritanea* and (8) *Silvanus surinamenis*.

Usually in Italy and France these pests like the beetle or the insect perfect (*Dermestes lardarious*) couples and lay eggs on cocoons usually in June. The eggs take four to seven days to hatch, the period of hatching depends on the temperature in the cocoon stores. The larva after hatching enters the cocoon by making a very minute circular hole in a peripheral way, starts feeding on the dead chrysalis and takes its shelter in the cocoon, to undergo the usual metamorphosis as chrysalis and beetles. The larval period is about 30 days, it undergoes four moults, remains as a chrysalis for 15 days and then comes out as a flying beetle.

The life cycle of the *Dermestes Lardarious* is as follows:—In the egg stage—about 5 days. In the larval stage about 30 days. In the chrysalis stage about 15 days.

Since the hole made by the tiny larva is too small for the beetle to come out, it makes a big hole in an erratic way. Some of them even die inside the cocoon in any one of these stages. Whether the hole made is big or small the cocoons become unfit for reeling because the larva or the beetle actually cuts the filament of all the layers and thereby damages the continuity of the filament. The main attraction for these pests is the bad smell emanting from the stained cocoons. The pest in the larval stage invariably makes its hole in the stained portion of the cocoon and as such it is impossible to see these holes easily. There are ways and means to eradicate once and for all this pest, or further destruction if the attack has already been made. The preventive measures are entirely in the hands of the technical assistants in charge of the cocoon stores, and the managers of the filatures, provided they follow strictly the points noted below:—

(1) When raw cocoons are received in filatures all stained, flimsy, crushed and deformed cocoons must be separated before they are issued for steaming.

(2) Disposal of these defective cocoons must be attended to immediately or if this is not possible they should be stored far away from the cocoon stores.

(3) Periodical disinfection of the cocoon stores is very important, and this should be attended to without fail.

(4) On no account should inferior quality of silk waste, basin refuse and dried unreelable cocoons be stored in cocoon stores, as these commodities are the chief causes of *Dermestes* attacks.

(5) Only sorted and stifled cocoons must be stocked in cocoon stores.

(6) On no account should the cocoons be steamed in inclement weather conditions, for it is difficult to get the lots dried effectively. Improper drying only causes the development of moulds; rats and squirrels are fond of steamed cocoon in preference to the conditioned cocoons.

(7) Floors, walls, roofing must be kept clean.

(8) When steamed cocoons are kept in stores in inclement weather conditions, care should be taken to see that quick-

lime pots are kept all round the cocoon stores at equal distances to check up the high percentage of humidity.

(9) On no account should cocoons conditioned either by hot air or sun-drying be kept along with steamed cocoons still containing moisture. Conditioned cocoons must be kept in bags loosely packed in gunny bags with a few naphthaline balls in them.

(10) Charcoal has the power of removing the bad odour. This bad odour is common in stores where steamed cocoons are kept without proper drying. It is advisable to keep the steamed cocoons in perforated trays thinly spread; keep in thin bags coarsely powdered charcoal tied to the roof at least 5′ apart from bag to bag. All corners of the stores and floor should be smeared with phenyle at least once a week.

(11) Cocoon stores should not be fumigated with sulphur nor should the walls be disinfected with formalin when cocoons are in stock, because the sulphur and formalin have a bad effect on silk reeled out of those cocoons. After disinfection and fumigation all the doors, windows and ventilators should be kept open at least for a day to drive out the strong smell. It is even desirable to give a lime-wash after the disinfection or fumigation.

(12) If the fumigation is absolutely necessary when the store is full of cocoons, fumigation of straw with dried neem leaves would serve the purpose quite all right. The straw and the neem leaves have to be slightly moistened before they are used.

(13) Venetian windows and ventilators should be covered inside with wire net to prevent rats and squirrels entering stores.

(14) In addition to the wooden doors in cocoon stores, it is desirable to have sliding doors filled up with wire gauze and this should be kept closed always and open only when the cocoons are taken out for issue or when the cocoons are taken in for stocking.

If the filature authorities were to pay strict attention to the points noted above, they can rest assured that the chances of *Dermestes* attacks will not only be minimized but rats and squirrels, which also cause a good deal of havoc to cocoons, will be kept away.

The idea of the mixed system of steaming and drying (either by hot air or drying in the sun) is to preserve the cocoons as far as possible in good condition. Immediately the steamed cocoons are removed from the steam chamber they are kept in the hot air chamber at a temperature of 80° C. for a few hours to expel the moisture contained on the surface of cocoons. But the moisture in the pupa remains constant. This mixed system of steaming and hot air is not economical because, in addition to the steam chamber, another hot air chamber will have to be built. The same effect could be achieved if the cocoons are exposed to the open sun.

Remedial Measures for the "Dermestes Lardarious"

If by chance, there is an attack of *Dermestes lardarious* in the cocoon stores, the only way to arrest further spread is by smearing a paste prepared by the following ingredients.* The paste must be smeared on black boards in convenient sizes, preferably 2½′ x 3′, and hung up on the walls 5′ from the floor. The boards must be hung up near the cocoon racks. The ingredients contained in the paste have the power to cause giddiness to the pest whether it be a pupa or a beetle. It renders the insect completely incapable of causing any damage and there it dies after some time.

Powdered ingredients should be crushed well with the aid of mortar and pestle by adding on and off tobacco decoction, when the ingredients are mixed up well, a little turpentine should be added not to make the paste too hard nor too loose. The paste kept in closed tins will retain its power for a couple of months. The efficacy of this paste will be all the greater by raising the temperature inside the stores and closing all the windows and

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* Ingredients and their preparation:

1.	Camphor	10 parts
2.	Naphthaline	10 parts
3.	Either dried chrysanthemum or *Dathuri* petals	10 parts
4.	Asafoetida	1 part
5.	Essence or decoction of strong tobacco ..	just sufficient for making paste.
6.	Turpentine	Enough for making into a loose paste.

doors at least for a day. One pound of this paste ought to last for one application for 100 sq. ft. If the paste proves ineffective it should be presumed that the attack is severe, in which case the proportions will have to be suitably increased. Before adopting the use of this paste in the stores, it is necessary for the authorities concerned to prepare a small quantity and actually try them on these pests to know exactly how it acts. Smear the sample paste on a 6″ blackboard, collect some live larva and beetles, confine them in a muslin bag and place the bag on the blackboard. All within 5 minutes the larva will struggle hard and die and for the beetle it takes at least 10 minutes. If they are convinced about the efficacy of the paste, they should lose no time in making use of this paste in stores attacked with *Dermestes*. Name given by the inventor to this paste is " Tatreca." Since this is the first of its kind in India, the inventor hopes that when the paste becomes popular, the name " Tatreca " should find a place in the " Glossary " of silk terms.

By the facts stated above the filature owners in India will now realize the great risks in adopting the time-honoured method of steaming cocoons. It is no doubt true that the actual cost of steaming cocoons will be cheaper but considering the other losses incurred due to the damage caused by some of these pests and moulds, it proves in the end to be the costliest method. Cocoons conditioned either by hot air or sun-dried are the best and absolutely foolproof in the preservation of cocoons and economy of space for storing.

The object with which cocoons will have to be conditioned in the filatures is to preserve them in good condition for fairly long periods till they are utilized for reeling. In big filatures purchasing cocoons in huge quantities during the harvest season is quite inevitable, to enable the authorities to run the filature without any interruption at least for eight months in the year. It will not be practicable to preserve cocoons in good condition if they are not conditioned fully.

The term " conditioning " need not confuse the readers; conditioning is nothing but removing all the moisture from the chrysalis, without spoiling the denomometrical qualities of the filament in the cocoon either by exposing the cocoons to the sun or hot air methods. In preference to steaming, scientists and people engaged in the industry after repeated experiments have invented certain types of hot air methods to obtain good results in silk reeling.

Conditioning Cocoons in the Open Sun

Even in sun-drying there are certain procedures to be followed; otherwise it is likely to cause great damage to cocoons and loss to the concern.

In Italy and France the cocoons are not usually dried in the sun, not because there is any defect in this system, but the climatic conditions are not quite congenial for this purpose. The warmth of the sun is not sufficient even for killing the pupa of the univoltine cocoons. Rich in silk layers, hence the sun's rays will not be enough to penetrate through the layers, besides univoltine pupa is much bigger than the multivoltines. As such the danger of exposing cocoons in such weather conditions is that it will only hasten the emergence of the moths. Besides the common races reared in Italy and France are yellow and golden yellow. In cocoons exposed to open sun the colour of the cocoons fades away rather ununiformly and the silk reeled out of such cocoons will not have the characteristic yellow colour.

From the filature point of view the colour is important to obtain tempting prices. As such the filature owners are not prepared to take the risk of spoiling the natural colour in cocoons and produce pale raw silk.

In South India where slightly greenish yellow races are reared, conditioning the cocoons in sun is more economical. In the sericultural tracts in Mysore State and Kollegal (Madras Presidency) the system of drying cocoons in summer is considered best. What applies to Italy and France applies also to Kashmir since the climate and the race of silkworm reared are almost identical, and they out of sheer necessity resort to hot air conditioning.

Bengal is engaged in rearing mostly multivoltine races producing deep yellow cocoons—" Nistari ". It is not good to expose this poor quality of cocoons in the sun. Cocoon should not only lose its colour but also due to its loose texture of layers takes in more dust. Silk reeled out of these cocoons will not only be pale but will also give a dirty appearance. In such places hot air system is by far the best.

In Mysore and Madras some of the professional men have implicit faith only in the time-honoured system of steaming and they are of opinion that sun-drying is irrational and affects *rendita*, less yield of silk, poor elasticity and tenacity. This kind of expert opinion is not based on any practical experience or results of experiments. The author, with his 24 years of experience in this particular branch of the silk industry, can with authority say that the conditioning of the cocoons in sun (summer) is about the best for Mysore and Madras. Silk reeled from the above method of conditioning was found to be free from the defects indicated above. In fact 60 per cent. of the cocoons reeled in the Government Silk Filature in Mysore from 1923 onwards were all sun-dried cocoons. The silk produced out of these cocoons was being exported to France. Lyons, the leading silk weaving centre in the world, has also consumed Mysore silk in the manufacture of high grade silk fabrics. Neither the weavers nor the conditioning house at Lyons complained that the Mysore silk is lacking in lustre, elasticity and tenacity. On the other hand, the opinion expressed by Messrs. Chabriers and Morel & Co., the leading raw silk merchants of international fame, is that the lustre, elasticity and tenacity of Mysore silk is quite remarkable. This opinion counts for much and one need not worry about the half-hearted opinion expressed by so-called experts who, without any facts and figures, try to prove that cocoons dried in sun affect the quality of silk.

It is also true that in India where multivoltines are reared, cocoons will be harvested during the greater part of the year; so the climatic conditions would also vary, and the filature owners should resort to sun-drying only when conditions are quite favourable and not always. In rainy and in inclement weather conditioning cocoons in hot air is no doubt the best system and on no account should the cocoons be steamed.

Procedure to be Adopted in Drying in the Sun

Raw cocoons received in the filatures will have to be weighed first and the weight recorded to enable the difference between the purchase and receipt weight to be known. After this the lots will have to be spread up either on trays or on date-palm mats for picking out all the crushed, black-stained, deformed, flimsy, weak and other defective cocoons before exposing to the sun. The defective cocoons picked out should not find a place in the stores. Sorted cocoons will have to be thinly spread out in sun on mats thinly spread up whose thickness should not be more than 3 to 5″ on the first day of drying, without any undulations. Handling the cocoons upside down should be attended to at least once in three hours for uniform drying and for effective killing of the chrysalis. Chrysalises though smaller in size have remarkable resisting power to the heat of the sun. If the layers of silk in the cocoons are thick and if proper handling is not attended to the bottom cocoons will not have the same chance of uniform drying. By careless drying it is inevitable for moths to come out; it is, therefore, necessary that the handling of the cocoons once in three hours during the first day should be attended to with the utmost care.

For complete conditioning of multivoltine cocoons in summer, i.e., March and April, it would take between five and six days.

The ratio given below is an indication to show that each day's drying is satisfactory provided the heat of the sun remains constant on all these days.

1st day drying 3 to 4″ thick ratio should be 1.2 to 1.3 to 1.

2nd day drying 5 to 6″ thick ratio should be 1.4 to 1.5 to 1.

3rd day drying 6 to 7″ thick ratio should be 1.8 to 2.1 to 1.

4th day drying 7 to 8″ thick ratio should be 2.2 to 2.5 to 1.

5th day drying 8 to 9″ thick ratio should be 2.7 to 2.8 to 1.

6th day drying 8 to 9″ thick ratio should be 3 to 3.1 to 1.

Handling of cocoons should be once in 2½ hours on the third day and once in two hours on the fourth and fifth days

(*Continued on page* 818)

Ardil—A New British Synthetic Fibre

STARTING metaphorically with a bag of monkey nuts and an idea, British chemists of I.C.I. have evolved a new synthetic fibre which is wool-like, does not shrink and is not attacked by moths. The material is known as Ardil from the fact that the idea was developed and the experimental work carried out at the I.C.I. Works at Ardeer—a factory founded by Alfred Nobel. Ardil was ready for development at the beginning of the war, but since then development work has been held up, and no samples are therefore yet available for distribution to the textile trade.

Ardil a Vegetable Protein Fibre

Wool is, of course, an animal protein fibre, while Ardil is composed of vegetable protein. Proteins are complex molecules built up of simple units called alpha-amino acids. There are about 28 such alpha-amino acids. Proteins differ from each other in the number, kind and arrangement of such amino acids in the molecule. The animal eats vegetable proteins in the form of grass, seeds and seed-cakes and in its digestive processes breaks them up into the simple units, the amino acids. These go into the bloodstream where a process of selection and reassembly takes place, some being used to repair essential parts of the body and some being used to satisfy energy requirements. Only a small part of the protein finds its way into the hair of the animal. All this is a complicated, slow and wasteful process as far as the production of wool is concerned, and in their experiments I.C.I. set out to make fibres more directly.

How it is Manufactured

The vegetable protein used in the production of Ardil is obtained from the groundnut, more commonly known as the peanut or monkey nut. Manufacture eliminates the usual synthesis performed by the animal. The protein is simply extracted from groundnuts with dilute alkali, precipitated and then made into a spinning solution. This spinning solution is extruded through the very small fine holes of a spinnerette into a coagulating bath and fine filaments are obtained. These can be cut into any *required length according to their final purpose. They may be mixed with wool, cotton or rayon, and yarns may be made on the worsted, woollen or cotton systems according to the type of fibre required.*

British Empire Raw Material

Ground-nuts or peanuts grow in large quantities throughout the British Empire—in India, West, South and East Africa, as well as in China, Borneo and America. Before the war about 8 million tons per annum were harvested. The composition of the groundnut is approximately—

	Per cent.
Arachis oil	48—54
Protein up to	28
Carbohydrate	11
Salts, water, etc. ..	8

The oil is used for human foodstuffs—such as salad oils and margarine—and the residue, after the protein has been extracted for manufacture of Ardil, can be used as a cattle-feed.

Ardil is a cream-coloured, crimped, resilient fibre which is soft and warm to the touch. It absorbs moisture like wool and has a similar heat of wetting. Ardil possesses felting properties, not like wool and fur which have scales on their surfaces, but because it moulds and "welds" under heat and pressure. Ardil dyes like wool, *but is not attacked by moths.*

Fabrics have been made purely of Ardil, but its best use is likely to be in combination with wool to manufacture worsteds, woollens, tweeds and knitted fabrics. Fabrics containing 50 per cent Ardil are scarcely distinguishable from 100 per cent wool. It is expected that Ardil will be cheaper than wool and so reduce the price of such fabrics. Ardil must not be considered merely as a substitute fibre competitive with wool. It is a complementary fibre and may enable lighter woollen fabrics to be made. When mixed with cellulose—cotton or rayon—Ardil changes the character of the final fabric, adding warmth, fullness of handle, resilience and a crease resistance to the cloth.

Ardil is an all-British invention, and it is hoped that Government approval may soon be obtained to allow this new fibre to be developed in the British textile industry.

Silk Industry In Bombay Province

The Bombay Silk Filatures Limited

INDIA is to-day the only raw silk producing country in the British Empire. It enjoys tariff protection. Further, the present war has established that silk is not only an article of civilian consumption but also a very important war material.

The Bombay Silk Filatures, Ltd., 21, Thalakwadi, Belgaum, has been formed for the purpose, among other things, of carrying on the business of producing raw silk. It has been started with an authorized capital of Rs. 20 lakhs, divided into 200,000 ordinary shares of Rs. 10 each; out of this only 100,000 ordinary shares have been issued.

The Board of Directors of the company consists of Srimant C. B. Patwardhan (Rajahsaheb of Kurundwad Senior, Chairman); Sardar Jagannath Maharaj Pandit; Sardar N. D. Sirdesai; Mr. R. G. Sule; Mr. G. Salvekar; Mr. Ramanlal B. Chinai; Mr. S. K. Ranade; Mr. S. P. Ogale; and Mr. Narayan Rao G. Naik. Messrs. N. G. Naik & Co., Ltd., Bangalore, have been appointed managing agents of the company.

Scope and Prospects

The Belgaum-Dharwar area, where the company is to start its operations, is best suited for the sericulture industry, both climatically and commercially. The Government of Bombay, who sanctioned the establishment of a silk farm at Belgaum as a result of experiments carried out there, have come to the conclusion that the industry can be developed on a commercial basis and have decided to offer the following concessions and facilities to the company:—

1. Recommendation to the proper authorities for the inclusion of the company in the Government of India Silk Filature Expansion Scheme.
2. Recommendation for grant of priorities in regard to the supply of materials for construction of buildings and erection of machinery and other equipment.
3. Acquisition of a suitable site for the company's factory at the latter's expense.
4. Nomination of the Director of Industries, Bombay, on the company's Board of Directors.
5. Permission to use river and other stream waters under Government control under certain conditions.
6. Guarantee that similar concessions will not be given to any concern in Belgaum and Dharwar Districts so long as the Government are satisfied with the company's progress.

In order to ensure the minimum production of cocoons to feed an economic filature unit of 100 basins to start with, the Government have directed their Director of Industries to proceed with the organization of the cottage industries section for rearing silk-worms and sanctioned a total expenditure of Rs. 1,33,220 made up of a recurrent expenditure of Rs. 48,480 and a non-recurrent expenditure of Rs. 84,740. Further, the Government have agreed to grant interest-free tagai loans in all of Rs. 1,50,000 for 1,000 families out of which one-third will be remitted if each family brings three acres of land under mulberry cultivation within two years of the grant of the loan.

This industry has commercially proved a great success in Mysore, Bengal, Madras and Kashmir and is now no more in an experimental stage. Mr. E. S. Ramanath, who made a survey and reported on the possibilities of sericulture industry in the Bombay Province, states that the Province is quite fitted to take up the industry and capture the market.

* * *

Reversion to Cotton Spinning in U.S.A.

AS a further step toward increasing the production of yarns and fabrics needed to meet urgent military requirements, the War Production Board has directed the conversion to cotton yarn production of at least 50 per cent. of the country's spinning facilities producing spun rayon and similar yarns, and the channeling of the fabrics made from these cotton yarns to fill orders of the Army, Navy, United States Maritime Commission or War Shipping Administration.

The direction affects all mills operating on the cotton system and producing spun rayon, cotton-rayon mixed or other blended or mixed fibre yarn except cotton-wool blended or mixed yarns.

A Note On Artificial Silk

By H. M. MULANY, M.SC.

(Specially Contributed)

ARTIFICIAL silk is a modern industry. Its rise and expansion in the world covers about two to three decades only. In 1929 the production of rayon in the U.S.A. was 121,566,000 lbs. In 1930 this came down to 115,000,000 lbs. but by 1932, it had again risen to 120,000,000 lbs.

The importance of artificial silk in India dates from about 1927-28 which year was remarkable for the rapid expansion of trade in this article. It received a setback in subsequent years due to fall in prices owing, perhaps, to the rapid penetration of Japanese goods into the Indian market. The total import of artificial silk went down from Rs. 477 lakhs in 1928-29 to Rs. 432 lakhs in 1929-30. This was followed by a slump for two years. But by 1934-35 it had again gone up to Rs. 416 lakhs. It must be remembered that lowering in value does not mean lowering in quantity. In fact the quantity imported increased, but dumping price was the real cause of the lower figures in value. Thus in 1934-35 trade increased in both quantity and value as compared with the two intermediate years, but as compared with 1929-30 it had increased only in quantity and not in value. The average price per yard fell from As. 8-11 per yard in 1929-30 to As. 4-9 in 1931-32 to As. 3-11 in 1932-33. There was an enormous increase of imports from Japan which went up to 125 million yards in 1934-35 valued at Rs. 310 lakhs as compared with 85 million yards valued at Rs. 252 lakhs in the previous year. Japan's share of supply was only 38 million yards in 1930-31. In 1931-32 it rose to 75 million yards and in 1932-33 it went up to 115 million yards—92 per cent. of the total import of artificial silk into India.

In 1931-32 Japan began sending to India brightly coloured cloth entirely made of artificial silk at As. 3 to As. 4 per yard. At this price they were replacing the more durable printed cotton cloth in the market.

The declared value of the artificial silk goods from various countries was as follows :—

—	1920-30	1930-31	1931-32	1932-33
	As. p.	As. p.	As. p.	As. p.
Japan	8 11	6 4	4 6	3 6
Italy	7 2	..	4 11	7 9
U.K.	..	8 6	9 4	7 7

The dumping policy of Japan went so far as to oust the Italian and Swiss cloth from the Indian market, and gain for Japanese monopoly in artificial silk supply to India. Only the United Kingdom survived this shock—in spite of the higher prices for British goods. For nearly five years Japan maintained its supremacy in supply of artificial silk to India, This will be evident from the following figures :—

The total value of artificial silk imported into India in the form of yarn and piecegoods pure and mixed) :—

Total import.		Of this the main supply came from		
Year	Rupees.	United Kingdom	Italy	Japan
1935–36 ..	3,15,78,196	1,484,871	2,886,485	26,397,995
1936–37 ..	3,85,59,690	1,103,309	1,362,542	35,306,573
1937–38 ..	4,87,48,684	1,505,674	214,784	44,127,107
1938–39 ..	2,23,61,749	1,161,253	5,494,041	14,705,488
1939–40 ..	4,58,62,302	1,284,035	5,354,513	37,881,282

Analysis of the above figures will be interesting. The total import of artificial silk rose from Rs. 3 crores 16 lakhs to Rs. 4 crores 88 lakhs in 1937-38, which was a record year for the import. The next year, however, saw a sudden depression to Rs. 2 crores and 24 lakhs. But in 1939-40 the market again recovered its high level at Rs. 4 crores and 59 lakhs. It is worth notice that throughout this period Japan had the lion's share of supply. The supply share in the boom years was roughly as follows :—

Supply from	1935-36	1937-38	1939-40
A. United Kingdom	5%	3%	3%
B. Italy	9%	4%	1%
C. Japan	84%	92%	82%
D. Other countries	2%	1%	4%
Total : ..	100%	100%	100%

The highest export figure was recorded in the year 1940-41 at Rs. 5 crores and 44 lakhs, the detailed figures of which are not available. In 1941-42, there again came in depression due to war develepent in the East. The artificial silk industry in India was forced by depleted supplies to curtail production.

The two major items of imports in artificial silk are : (1) yarn and (2) piecegoods, the remaining small portion being covered by hosiery and blankets, etc. The division of total imports into these two items was as follows :—

Total yarns.		Total piece-goods.
Year.	Rupees.	Rs.
1935–36	83,63,310	2,22,51,358
1936–37	99,39,343	2,69,82,297
1937–38	2,05,341	2,66,91,084
1938–39	99,53,799	1,20,19,099
1939–40	2,15,91,919	2,36,68,168

Of these total imports, the share of Japan and of the United Kingdom in 1939-40 was 6 per cent. and 91 per cent. respectively, the remaining 3 per cent. being from other countries.

The yarn import went up to Rs. 2 crores and 65 lakhs in 1940-41, but in 1941-42 it again dropped down by 41.5 per cent. to Rs. 155 lakhs only. The yarn import which was only Rs. 97 lakhs in 1938-39 was rapidly mounting up. Following the entry of Italy into war Japan was the sole supplier and could dictate her own terms. But even that source dried at the end of 1941. Import of pure artificial silk goods also shrank from Rs. 245 lakhs in 1940-41 to Rs. 168 lakhs in 1941-42, and this also was mainly from Japan.

The four to five crores worth of artificial silk imports per year in India must be an eye-opener to all enterprising industrialists in India specially at a time when the principal supply from Japan is cut off and neither Britain nor the United States have enough shipment or supply at their disposal to meet the needs of the Indian textile industry.

The best raw material for the manufacture of artificial silk is plentifully available in India. India abounds in forests, a resource that can be tapped at any time for the manufacture of wood-pulp, the starting material for artificial silk industry on the Continent. In fact, although cotton contains 87-91 per cent. of cellulose and wood only about 60 per cent., and although artificial silk prepared from the former shows 25 per cent. greater strength and durability than that prepared from the latter, the major part of viscose is manufactured from wood. But besides this, India has other vast and important sources of cellulose which should not be forgotten. There are the fibres from jute, sunn hemp and linseed. The average percentages of cellulose in these are as follows :—

Jute ..	.. about	63 per cent
Sunn hemp	.. ,,	80-82 per cent.
Linseed ..	.. ,,	76 per cent.

These compare very favourably with wood which contains only 64 per cent. cellulose. In addition to these, India produces annually a large quantity of linters, another good source of cellulose and the cellulose of agave has not yet been tapped. India's export of these articles is as follows :—

Fibre.	1935–36	1936–37	1937-38	1938–39	1939–40
1. Cotton waste	Cwt. 467,200	Cwt. 489,483	Cwt. 458,662	Cwt. 549,630	Cwt. 603,985
Valued at	Rs. 70,00,825	Rs. 76,89,479	Rs. 74,28,401	Rs. 80,75,975	Rs. 93,34,622

Nearly half of this goes to the United Kingdom. Japan has no share in this.

2. Flax-fibre Valued at	Rs. 3,220	Rs. 4,041	Rs. 11,700	Rs. 25,316	Rs. 4,689

The potential supply of this fibre is, however, much larger.

3. Hemp, chiefly sunn	Cwt. 642,932	Cwt. 769,105	Cwt. 829,102	Cwt. 816,312	Cwt. 743,902
Valued at	Rs. 60,34,450	Rs. 69,27,119	Rs. 74,50,413	Rs. 71,98,133	Rs. 86,19,670

Nearly half of this goes to the United Kingdom.

4. Jute	Tons 771,324	Tons. 820,591	Tons. 747,258	Tons. 690,439	Tons. 570,062
Valued at	Rs. 13,70,76,350	Rs. 14,77,09,679	Rs. 14,71,90,313	Rs. 13,39,67,180	Rs. 19,83,33,405

There is thus an export of about 50,000 tons of cotton waste and about one lakh tons of other fibres. The production of cotton waste would be much more and the production of tow of other fibres, though not recorded, would be at least about 50,000 tons. The Tata Chemicals, the Reh deposit of U.P. and the alkali works at Dhrangadhra may be able to provide the alkali required for the process and the Baluchistan Sulphur and the Jharia Coal Fields may be developed as a source of carbon bisulphide for the viscose process which at present supplies 90 per cent. of the world's production of artificial silk. The only other process is the acetate process which supplies the remaining 10 per cent. of artificial silk in India. The process is considered costly in foreign countries, though attempts have been made to cheapen it. The only inducement for it in India is the vast resources of molasses. Attention is also drawn to the possibility of developing the Bhadravati Iron Works as source of supply of glacial acetic acid.

The Processes

There are four main processes used in the manufacture of artificial silk on a commercial scale :—

1. The viscose process.
2. The cellulose acetate process.
3. The *cuprammonium* process.
4. The *nitrocellulose* or *collodion* process.

The world's production in each of these in 1930 was:—

1. Viscose silk	322,800 lbs.
2. Acetate silk	32,000 ,,
3. Cuprammonium silk	15,000 ,,
4. Collodion silk	9,000 ,,
5. Other processes	1,500 ,,

Thus the viscose process represents about 80 per cent. of the world's production, the acetate process about 10 per cent., whilst Nos. 3 and 4 are insignificant. This is because the viscose process is more economical and yields a more lasting material, whilst the acetate silk decomposes in the presence of moist heat with unpleasant effects. The relative production in the principal countries was as follows in 1930 :—

United Kingdom ..	.. 48.8	million	lbs.
Germany ..	.. 57.8	,,	,,
France ..	.. 39.2	,,	,,
Italy ..	.. 59.7	,,	,,
Japan ..	.. 33.3	,,	,,
United States ..	.. 97.5	,,	,,
Rest ..	.. 74.4	,,	,,
Total :	.. 410.7	million	lbs.

The Viscose Process is based mainly on two steps. Reaction of cellulose with a solution of caustic soda, and interaction of alkali-cellulose with carbon bisulphide. As both these reactions are carried out at ordinary temperature there should be no difficulty in the process theoretically.

The outline of the process is as follows :— 100 kgs. of cellulose are steeped in 1,600 litres of 17-18 per cent. caustic soda solution for 2-4 hrs. at room temperature (or preferably in vacuum). The excess of alkali solution is then pressed out till the weight is reduced to 395 kgs.

The steeped and pressed pulp is now transferred to a kneading machine and converted into a loose bread-crumb like material. This takes 2-3 hrs. The " crumbs" are then placed in covered bins (10 gallons) and kept at 20-25°C. for 48 to 72 hrs. This is known as mercerization.

The mercerized alkali cellulose is now transferred to a sulphide drum or churn (also known as Barratte) for treatment with carbon bisulphide. Barratte is a tightly closed 1,200 litre iron cylinder slowly revolving on its horizontal axis (2-3 revs. p.m.) double jacketed to allow for cooling water. A charge of 325 kgs. alkali cellulose is put in which occupies 920 litres and leaves about 30 per cent. space free. 30 to 32 kgs. of Cs_2 are introduced slowly through a central pipe line. The reaction is exothermic and requires 2-4 hrs. Temperature is kept below 30°C. The cream coloured alkali cellulose gradually changes to yellow orange red and brown red. Care should be taken to stop the churning before the cellulose xanthate commences to cake together in large masses. The excess of Cs_2 is blown or sucked out, or displaced by an inert gas, e.g. N_2 or Co_2.

The cellulose xanthate is next mixed with enough soda and water to give a viscose with 7-8 per cent. cellulose plus 6.5 per cent. alkali (as Naoh). This may take 3 to 6 hrs. at 15-17°C. (cooling).

This viscose solution is sucked or blown into ripening vats and kept at 15°-20°C. till it reaches a stage when it is fit for spinning. This may require 4 to 5 days. After this the ripened viscose solution is filter pressed and stored in cylindrical vessels till required for use. It is kept under vacuum for at least 24 hrs. before actual spinning, to avoid any possible air bubbling in the thread. The viscose is then spun in special machinery after passing through an acidic bath (e.g., sodium bisulphate 40 parts, water 60 parts and sulphuric acid 7 parts (66 per cent.)). With proper supply of caustic soda and carbon bisulphide the process seems a promising one. Even the production of carbon bisulphide may be started in India for this purpose.

Acetate Silk

The only other process worth considering is the acetate process. There is something in this because of the possibility of obtaining acetic acid from molasses. The process involves:—

(1) Acetylation of the air dry cellulose by nearly 4 parts of acetic acid and 3 parts acetic anhydride in the presence of sulphuric acid, or zinc chloride. (2) Hydrolysis by adding water and acetic acid. (3) Ripening for at least 12 hours. (4) Precipitation of cellulose acetate by the addition of a large volume of alkaline water (to neutralize the H_2SO_4). (5) Washing, centrifuging and drying at 20-30° C. in well ventilated rooms.

The spinning part of the question may be better dealt with by the textile expert.

Both the processes are not so simple as they look on paper. But they have been successfully handled on very large scale in foreign countries, and there is no reason why they should not develop in India.

Time-honoured Method of Steaming Cocoons

(*Continued from page* 813)

and it is enough if the cocoons are handled once in one and half hours. When the ratio of 3 to 1 or the most 3.2 to 1 is arrived and there is no need to expose the lot again to the sun. It may be taken for granted that the lot is completely conditioned and the cocoons can, without any fear, be stored in gunny bags. It is not desirable to pack the cocoons in gunny bags when the ratio of the sun-dried cocoons falls below 3 to 1, due to the fact that the chrysalis will still have some moisture content which will only lead to the development of moulds (fungus). Even overdrying the cocoons is not desirable, i.e., over 3.1 to 1. Because the chrysalis will start giving out little percentage of oil contained in them and this oil coming in contact with silk filament affects the quality of silk.

The problem of effectively killing the chrysalis without causing damage to the silk was the subject for a serious study by scientists for a number of years in Italy and France, particularly on the resisting power of chrysalis to high temperature. They have devised many kinds of hot air method by which cocoons could be conditioned without spoiling quality at less cost.

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By K. N. TIKKU,

Superintendent of Industries, Jaipur

As already mentioned in my previous note, the total quantity of raw wool produced in all the tehsils of the State is approximately 51,29,686 lbs. per annum, most of which is being exported in raw form to British India. Since the Jaipur Government under Sir Mirza Ismail's leadership launched a policy of industrial development, substantial progress has been made in the woollen industry of Jaipur State, and since the last two years a fairly large export trade in blankets, tweeds, fancy rugs, felts, carpets, etc., has been built up. This has to a large extent solved the problem of rural employment, besides being a source of income to the capitalist factory owners. During the last two years as many as 16 woollen factories have sprung up in the State and all around we find spinners, carders, sorters and weavers engaged in their respective jobs.

One of the main branches of the woollen industry which has been carried on since the last few decades in Jaipur city and some parts of the State such as Malpura, Newai, Sawai Madhopur, Shekhawati, Torawati and Chomu is the manufacture of felts. These felts (*namdas*) vary from ⅜″ to ½″ in thickness. Other articles that are produced are *ghooghies asans*, bedsheets, etc., all of which have a very good market outside the State. Since the last two years large orders were received from I.S.D. for felt and felt packing cloth, more than Rs. 16,12,734 worth of which were supplied by two firms viz., Messrs. S. Zoraster & Co., and Messrs. Modern Wool Manufacturing Co., Jaipur.

How Namda is Made

The process is quite simple and differs from that employed in Kashmir where namda is made with the feet and not by hands. No machine or implement is used. The wool is first cleaned and washed in order to remove the burrs and dirt. It is then carded well either with carding bows or carding machines. A layer of clean wool of required thickness, length and breadth is spread on a piece of cloth with the help of a stick. Water in small quantities is sprinkled over the layer to moisten it. The wool is then pressed with the hands and sticks. The cloth together with the layer of wool is closely rolled and pressed till it becomes stiff. It is then allowed in its rolled form to dry in the sun. Again it is spread out and a soap solution is sprinkled over it. This process of rolling and pressing is repeated several times, accompanied by the sprinkling of soap water, till the fibres become tough and evenly compressed. The piece thus prepared is known as felt or namda. Then it is removed to a big water tank and washed well before it is dried.

At least five felt manufacturers (namdagars) are required to prepare one maund of felt per day, and they are paid at the rate of As. 5 per seer of finished material. Fancy *asans*, *ghooghies* and bedsheets are made by pasting flowers and other figures cut out of coloured flannels on the felt, when it is still raw, with soap water. For some time a duty at Rs. 4 per maund was being levied by the Jaipur Government on the export of felts, but it has now been abolished.

The Department of Industries is trying to develop this industry by rendering all possible assistance and the local production of raw wool is now being augmented by imports in order to meet the increased demand of felts. For the last two years factories and cottage workers have been advised to prepare felts of softer texture and larger dimensions and to dye them in attractive shades so that they could be used as blankets. At present we see felt blankets bordered with satin cloth in different shades being produced and sold like hot cakes, as these are comparatively cheaper and more comfortable than woollen blankets. Attempts have been made to manufacture felt hats, felt coats and felt jackets of cut pieces for which there is a good market outside the State. It is expected that one of the firms will import machinery from the U.S.A. for the manufacture of superfine felts shortly.

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Top

Sorting, grading and cleaning the wool.

Middle

Carding the wool before the felting takes place.

Bottom

Felt manufacture.

Brooksbanks tan the *best* Picking Bands

• AGENTS •

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India's Share in Economic Warfare

Foreign Trade Controls

Vicissitudes of the Cotton Textile and Raw Cotton Industries

INDIA's share in economic warfare was primarily the responsibility of the Commerce Department of the Government of India, before the creation of the Food Department, the Department of Industries and Civil Supplies and the Planning and Development Department.

Thus, price control was originally dealt with by the Commerce Department, particularly the question of controlling the prices and movements of foodgrains. Industrial controls of various kinds were also instituted by it, with the dual object of enabling the Supply Department to secure their requirements on a fair basis and the civil population its essential needs. It implemented methods to step-up industrial production and organized industrial research so that new uses might be found for raw materials which could no longer be exported. The Commerce Department was also responsible for focussing attention on problems connected with post-war reconstruction for it was at the first meeting of the Reconstruction Committee in June 1941, presided over by the Hon'ble Sir A. Ramaswami Mudaliar, the then Commerce Member, that it was decided to set up four other committees to deal with labour and demobilization, disposals of war contracts, public works and Government purchases and trade and agricultural development, respectively. A Consultative Committee of Economists was also set up, the first meeting of which was held in October 1941, and over which also the Commerce Member presided.

Price Control Conferences

Six Price Control Conferences were held under the auspices of the department, from the outbreak of war to September 1942. At the first, held immediately after the outbreak of war, the question of the war's reaction on prices was considered in all its bearings. While Provincial Governments were given certain general powers to control and regulate prices wherever they considered such steps necessary, it was the general opinion of the conference that agricultural prices should not be controlled and should, on the other hand, be allowed to make some headway as a result of the war, to make up to some extent the losses of the pre-war depression period. This was also the opinion of the second Price Control Conference, held in about the middle of 1940.

After a spurt in the early months of the war, there was a tendency in 1940 for prices to decline. They resumed their upward trend in 1941, but there was nothing to warrant drastic and comprehensive action. In the middle of 1942, however, after the Japanese occupation of South-east Asia, including Burma, there was a break in prices, which assumed a runaway character in the last quarter of 1942 and the first half of 1943.

At the third Price Control Conference, held in October 1941, attention was paid to cotton cloth and yarn, prices of which had soared as a result of the freezing order against Japan. This discussion might be said to have been the genesis of plans for the production of Standard Cloth and for the control of cloth distribution.

Cloth for the Poor

The Standard Cloth scheme had its genesis in the discussions with the cotton textile industry at this conference. At the fifth Price Control Conference (April 1942) it was suggested that Provincial Governments should report to the Central Government the quantities of Standard Cloth which they would require for their respective areas. The question of Standard Cloth was also considered in the sixth Price Control Conference, held in September 1942. Subsequently, the then Commerce Member (Mr. Nalini Ranjan Sarkar) visited Bombay and discussed the question of Standard Cloth manufacture and distribution with representatives of the cotton textile industry. It was decided that the Government of India should appoint a Standard Cloth Commissioner and set up a Standard Cloth Panel to advise the Central Government on matters concerning Standard Cloth. The industry agreed to place at the disposal of the Government 60 per cent. of its total productive capacity for the manufacture of Standard Cloth and cloth ordered by the Supply Department for war requirements. The agreement was expected to give a maximum of 1,500 million yards of Standard Cloth in a year. It was anticipated that the price would be about 40 per cent. below current market rates.

With the creation of the Industries and Civil Supplies Department in May 1943, the question of Standard Cloth manufacture and its supply was taken up by the new department from that date.

Industrial Research Furthered

Early in the war, the Board of Scientific and Industrial Research was set up under the auspices of the Commerce Department for research on the utilization of India's raw materials which had lost their export markets as a result of the war and discovering new processes and methods by which industrial development could further the war effort and for taking advantage of the elimination or the reduction of certain kinds of imports. A permanent Council of Scientific and Industrial Research was subsequently set up, to co-ordinate and generally to exercise administrative control over the work of the Board and its adjunct, the Industrial Research Utilization Committee. The use of vegetable oils as a lubricant, preparation of plastic materials chiefly from certain products available in the country, manufacture of sulphur, preparation of dyestuffs, particularly dyestuffs from vegetable products, and production of rayon and cellulose from raw materials available in the country—these were some of the main tasks on which the Board was engaged during the period it was connected with the Commerce Department.

An Industrial Research Fund was set up in September 1942 to foster industrial development, by an annual grant of Rs. 10 lakhs for a period of five years. Several committees were constituted to investigate subjects of primary importance in a planned programme of research.

In May 1943, the Council of Scientific and Industrial Research, the Board of Scientific and Industrial Research and the Industrial Research Utilization Committee came under the jurisdiction of the Industries and Civil Supplies Department, which also took over the stepping-up of industrial production.

Trade Controls : Export Control

On the outbreak of war, it became necessary to control the foreign trade of India. Every precaution had to be taken in the first instance that no goods reached the enemy, directly or indirectly; that was a fundamental consideration in the prosecution of economic warfare. Rigorous export control thus became a necessity.

Another problem also faced the Commerce Department. India lost many of her usual export markets for her principal export commodities, particularly for raw cotton, raw jute and oilseeds. The offtake of Indian cotton by foreign countries in the pre-war years was about 3 million bales a year distributed as follows:—1,000,000 bales by the Continent of Europe; 1,500,000 bales by China and Japan; and 500,000 bales by the U.K. The Continental, Chinese and Japanese markets were lost. Japan was the principal purchaser of India's short-staple cotton. The problem was to deal with the situation arising from the surplus production of cotton. With the rising *tempo* of production in the Indian mills, there was more consumption of superior varieties of Indian cotton in the country itself and with the inauguration and vigorous prosecution of the " Grow-more-food " campaign, the acreage under short-staple cotton was reduced. About 4 million acres under cotton cultivation was diverted to the cultivation of food crops.

Control of Cloth Exports

With the preoccupation of the U.K. with her war production and the elimination of Japan from the markets of the world, a shortage of cloth was felt in several countries which were mainly dependent on those two producing countries. The Indian cotton mill industry had thus an excellent opportunity to capture export markets at attractive prices. Exports of piecegoods, which before the war amounted to only about 200 million yards, soared (at one time) to more than 800 million yards.

But, with the emergence of the inflationary spiral in India in the early half of 1943, several counter-measures had to be adopted. One of these measures was rigorous restriction on the exports of commodities which were required in the country for essential civil consumption. Cloth was one. A ceiling of 600 million yards was fixed for the annual exports of piecegoods from India. To assist importing countries to obtain supplies at reasonable prices, ceiling prices were fixed for mill-made cotton piecegoods exported to them. Powers were taken by the Central Government to prescribe and enforce minimum specifications and packing for cloth intended for export. The Government of India reserved the right to withdraw these ceiling prices in respect of exports to any country where the Government concerned did not adopt measures for regulating prices and the margin of profit, in the interests of the ultimate consumer. Latterly, as scarcity has been felt in finer varieties, export control has been further tightened in respect of these varieties, with a view to making them available to consumers in the country.

With the continuous and rapid increase in the volume and complexity of work connected with export trade control, a separate executive organization was set up last year in New Delhi and entrusted with the administration of the Export Control Regulations under the general direction of the Commerce Department. The Chief Controller of Exports is the head of this organization.

Stimulating Post-war Export Trade

The department is also taking steps to see that India secures a fair share of the world's export trade at the end of the war against Japan. Indian Trade Commissioners are already functioning in the U.K., the U.S.A., Canada, Australia and South America. The department plans to appoint Trade Commissioners in several other countries, particularly in the Middle East, Africa and South-east Asia, where there is likely to be a good market for Indian products. A Trade Commissioner has already been appointed for Teheran and will take up his duties in the near future. It is also proposed to set up a Trade Commissioner's office in Iraq.

Commercial publicity on the widest scale is contemplated. It is also proposed to reorganize the entire Trade Commissioners' cadre to enable the organization to subserve the needs of India's foreign trade to a greater extent than in the past. The present Trade Commissioners have reported on post-war trade prospects in their respective areas; these reports are receiving close attention.

An organization has also been set up in the department to study problems relating to post-war foreign trade, trade policy, trade treaties and participation in international trade organizations. Questions connected with the future tariff policy and the nature of the machinery needed to implement that policy are also under active consideration.

Import Trade Control

Import control was instituted from the beginning of hostilities for two reasons. In the first place, the U.K. and America, the two main countries from which India could get consumption goods, were preoccupied with war production. Export trade was controlled at the other end and import trade had to be controlled at this end. In the second place, there was the question of lack of shipping space.

But the policy called for some relaxation from the middle of 1943, with the spiral of inflation. The need to adopt anti-inflationary measures being paramount and urgent, it was considered desirable to permit large-scale imports of such types of essential consumer goods as did not compete with local production.

To permit the import of more consumer goods, the import control lately has been further liberalized, by bringing under Open General Licence a number of consumer goods which were previously subject to strict import control. It is expected that the essential needs of India will be supplied by the U.K., to a fair extent in the current year and to a substantially larger extent in 1946.

India's Trade With East Africa, Middle East, America and Australia

Post-war Prospects Examined by Trade Commissioners

"BESIDES cotton piecegoods, there are quite a large number of miscellaneous commodities which are known to be manufactured in India on a fairly commercial scale and for which there are reasonable prospects of capturing larger share of East African markets. Although the demand on India in respect of many of these articles can at present be called a temporary one, having been created by abnormal circumstances arising out of war conditions, it can reasonably be hoped that once Indian products have gained popularity in these markets, India should be able to retain for herself a much improved share of the trade even in the post-war period."

Thus observes the India Government Trade Commissioner, Mombasa, in his report on the "Prospects of Post-war Trade between India and the East African Territories" which comprises Kenya, Uganda, Tanganyika and Zanzibar.

Advice to Indian Exporters

The report advises manufacturers and exporters in India "not to ignore the existing opportunities for building up their trade connections with East African markets. They should not relax their efforts to keep in close touch with importers in these areas with a view to transact as much business as is possible under the present conditions and with the more important object of securing a permanent footing for Indian trade during the post-war reconstruction period."

India's Trade with East Africa Increases

In spite of export and import restrictions, the report observes, India has been able to increase her percentage share in the import trade, between 1938 and 1942, from 4.2 to 21.6 in Kenya and Uganda, from 4.7 to 45.5 in Tanganyika and from 9.6 to 25.0 in Zanzibar. The value of import trade from India during the period rose from £442,472 to £2,994,777 in the case of Kenya and Uganda, from £161,902 to £1,680,000 in the case of Tanganyika and from £93,733 to £260,973 in the case of Zanzibar.

India Replaces Japan

A wide-range of commodities previously obtained from Japan and continental countries are now imported from India. In 1942 India supplied 88 per cent., 93 per cent. and 72 per cent. of the cotton textile imports of Kenya and Uganda, Tanganyika and Zanzibar, respectively. The East African Territories, according to the report, constitute a large market for Indian cotton piecegoods. Japan was the largest source of imports before the war. When that country entered the war, these territories had to look mainly to India for their textile needs. The Indian textile industry on its part did not neglect this favourable opportunity.

Prospects of Different Commodities : Piecegoods

Discussing the prospects for different Indian commodities in East African markets, the report observes that in respect of grey sheetings India's export trade with East Africa will continue, since only Japan is likely to be a serious competitor in this product. Trade in grey drills will also remain in the hands of Indian manufacturers. As regards bleached varieties, it will not be possible to retain the gains of the war period.

Printed khangas offer a good line of business; but this line of trade should be properly investigated according to market needs. In regard to prints other than khangas, although India got a chance of trading in this line for the last four years, Indian manufacturers have not studied the actual requirements of this market and have not yet standardized their goods. "Unless Indian manufacturers pay special attention to the requirements of these markets," observes the report, "it is apprehended that business in this line might slip away from their hands in the post-war period."

As regards dyed goods, a few varieties have been standardized and there is every possibility of the business remaining in Indian hands provided they turn out standard qualities. India is doing at present very good business in coloured goods, but the manufacturers have not yet fully studied the designs that are popular in these markets.

There is a very good chance for business in cotton blankets, the chief suppliers of this article being Holland and Japan before the war. Indian manufacturers can capture the post-war trade in cheap ready-made mosquito nets which Japan used to supply in thousands of bales before the war.

Under existing conditions, art silk fabrics of Indian manufacture are finding ready sales in these markets. But there is not much likelihood of India retaining this business in the post-war period, when the main producers resume their supplies.

Post-war Trade with the Middle East Countries

In dealing with the future export trade of India with the Middle East it would perhaps be best to have for ready reference some information under the following heads, says the Indian Government Trade Commissioner, Alexandria.

1. Articles which India used to export during the immediate pre-war period.
2. Articles obtained from India since the outbreak of war.
3. Articles for which enquiries have been received from Middle East territories.
4. Articles for which firms in India are seeking markets.

India has started exporting some new articles which she had not previously sent to some of the territories here. The number of such articles is, however, still very small.

Unfortunately on account of the war situation, firms in India could not entertain the inquiries from the Middle East countries. On the other hand, importers in Alexandria made innumerable references to the Trade Commissioner with the hope of obtaining their requirements from India, as their usual sources of supplies were cut off. This deserves a close study of exporters in India, so that they may see what lines of trade may be developed.

Short comments on some of the principal articles of export are given below. Specific inquiries from manufacturers and exporters in India about the various lines in which they are interested will be useful in this connection.

Jute manufactures.—This is by far the most important commodity exported from India both in the pre-war period or since the outbreak of war. The trade with the Middle East countries in this line is well developed and as India has a virtual monopoly, we may rightly expect it will continue.

Reports have been submitted about the establishment of a company in Egypt for the manufacture of jute goods. Some work such as the manufacture of ropes and twine has already commenced, but many years must elapse before this concern can hope to meet full local demand or those of the other Near and Middle East countries.

Cotton textiles.—The export of cotton piecegoods to the Middle East countries has greatly increased since the outbreak of war. The figures for the years 1940-41 to 1942-43 will bear this out. The restrictions imposed on exports from India in view of the supply situation, have greatly affected this trade. For example, Iraq which had imported over 90 million yards of cotton piecegoods during 1942-43 was only able to get 12¾ million yards during 1943-44. There was a further decrease in the first quarter of 1944-45 (April-June), i.e., 666,154 yards as against 24,570,240 and 1,898,897 yards in the corresponding period of the years 1942-43 and 1943-44, respectively. In the case of other territories the decrease is not so pronounced although Egypt obtained during the first quarter of 1944-45 about 2,000 yards only as against nearly 17 million and 1½ million yards in the corresponding period of the two previous years.

The Middle East should provide a good market for Indian piecegoods now that one may expect Japanese competition will be elminated for a good many years. The competitive power of the mills in China established under Japanese supervision and enterprise is an unknown factor, but here again we need not perhaps expect that exports will commence at an early date.

In view of the introduction of a great variety of Indian piecegoods whose quality and workmanship have been well commented upon, we might hope that a fair portion of the Indian trade in piecegoods will continue after this war. To bring this about concerted action is necessary to see that Indian goods are supplied according to samples and specifications and manufacturers pay special attention to create a good name for themselves.

The following variety of goods, among others, it is expected, will find markets: Grey goods such as Sheetings—Cat and Hat—T-cloth—etc.

Grey printeds—grey mulls—grey voiles and other grey fancy goods.

Dyed goods such as dyed poplin—dyed cambric—dyed batist—dyed drill—dyed sateen—dyed voile.

Yarn dyed goods such as ginghams—striped poplin—striped shirting—bed tickings.

White shirting and white mulls.

Reports are received from time to time about the industrial enterprises undertaken in the Middle East territories. Some of these are of a somewhat glowing nature. Certain progress has been made but in view of the comparatively bigger industrial advancement made by India in the pre-war period and much accelerated since the outbreak of the present war, she should be in a position to supplement the efforts made by the various territories to meet the requirements of their people.

Samples.—While dealing with export trade the question of samples requires to be mentioned. Their despatch has been urged some time, while response from firms in India has not been really satisfactory; yet it must be admitted that those willing to send samples have encountered much difficulties. It is necessary to provide special facilities as samples are required to find markets for Indian goods. Striking improvements have taken place in many lines of goods manufactured in India and it is necessary to show that the articles obtained from India are of a higher quality than that usually attributed to the Orient.

Trade with the United States of America

The following are extracts from the report on post-war trade possibilities between India and the United States of America by Mr. S. K. Kirpalani, Indian Trade Commissioner in New York :—

There is a shortage of jute yarns. American jute yarn mills, however, are greatly agitated over their future prospects because of yarn manufacture being developed in Calcutta on a large scale and in quality comparing favourably with American manufactures.

There is a very keen pent-up demand for all coverings and it will be several years before this demand is fully met. America is most anxious to get as much wool as India can spare. For the present, however, the use of carpet manufacturing wool—Indian wools are used solely for carpet manufacture—is restricted to some extent by the limited production of jute yarn required for backing of carpets.

America does not require any long-staple cotton from India. Of the short staple cotton that is imported, 80 per cent. goes in the manufacture of worsted cloth. There is a keen demand for Indian short-staple cotton. In the immediate post-war period, when the shipping position becomes easier, a fairly brisk demand for this variety is anticipated.

There is expected to be a good demand for Kashmir *namdahs* and Bangalore druggets. Travancore and Cochin coir mats also are likely to have good demand. There is a keen demand at present also for Mirzapur thick pile woollen carpets and there should be a bright market for them after the war. Amritsar woollen carpets are losing ground ; popular taste is veering strongly in favour of Persian carpets.

Discussing the prospects of developing the export trade of Indian silk manufactures with the U.S.A., Mr. Kirpalani thinks that a lucrative trade could be built up in this commodity in the immediate post-war period, on account of the elimination of Japanese silk manufactures from the American market. He says in this connection : " In spite of the development of rayon and nylon fabrics, about 70 per cent. of the superior silk production of Japan used to be imported in the U.S. market. Some of this trade may well be captured by Indian silk, particularly if it is block printed in the styles we know as Bombay prints. Samples of Bombay print silks, Kashmir embroidered silks and Mysore silks with patterns woven in, which I have shown informally to people here, have evoked a strongly favourable response. If fairly large and representative sample consignments of these various kinds of silks could be sent over during the next year or so, they would, I feel confident, capture a good market. Another fabric which is likely to command favour here is the Benares and Surat gold and silver *sari* cloth. I suggest that the Directors of Industries of the various Provinces and Indian States concerned be approached to arrange for sample consignments and, what is more, establish regular production with a view to capturing good markets here."

Post-war Trade with Australia

"As compared with the pre-war years, the value of exports from India to Australia in five years recorded a seven-fold increase. This phenomenal increase was due almost entirely to the elimination of competitors brought about by the war. The commodities in which the increase occurred were those which India was in a position to supply and which could not be obtained from other sources. The most spectacular increase took place in the exports of cotton textiles." Thus observes the Indian Trade Commissioner in Australia, in the course of a report to the Commerce Department on the prospects of post-war trade between India and Australia.

India Exports Sevenfold

Before the war, the export trade from India to Australia was about £3,000,000. In the first year of the war, i.e., in 1939-40, this figure was more than doubled. In 1940-41 a further improvement of nearly 20 per cent. was recorded, to be followed by a rise of over 50 per cent. in 1941-42 and another 40 per cent. increase in 1942-43. There was a further rise of 30 per cent. in 1943-44. Thus in the first five years of the war, the value of exports from India to Australia increased sevenfold.

Australia Improves her Position

Similarly, the value of Australia's exports to India also increased. In 1938-39, it amounted to over £1,500,000 as against under £1,000,000 in 1936-37. This improvement has been maintained during the war period. The value of this trade progressively increased and amounted to £7,800,000 in 1943-44, which represents a fivefold increase over 1938-39.

Post-war Prospects : Cotton and Cotton Textiles

Examining the post-war prospects for India's export trade the report deals in the first instance with those commodities which were the main items of this trade before the war. In its opinion the pre-war position of raw cotton—America and India sharing the Australian market equally—would be restored after the end of the war. But it is not very sanguine about the prospects of India maintaining her war-time gains in Australia in respect of cotton textiles. "As soon as normal conditions are restored and cotton textiles are on offer from other sources," it says, "exports from India are likely to register a very sharp decline," which will, however, be mitigated to some extent by the fact that, in all probability, Japan will not be in a position to participate in this trade.

Other Goods

The demand for jute bags can be expected to expand to the pre-war level. Indian coffee will have serious competitors, the relative proportions of imports from the different producing countries being mainly determined by the price factor. There is a bright future for trade in floor coverings, if exporters take measures to study the special needs of the Australian market. The pre-war position is likely to be restored in respect of mats.

Prospects of New Lines of Business

In addition to the commodities mentioned above, observes the report, a demand has grown up in Australia during the war for a variety of other types of manufactured goods from India. These are : artware, wearing apparel, electric appliances, glassware, crockery, cutlery and hardware, toys, umbrellas, art silk, silk, surgical instruments, buttons, paper and paste board and rubber manufactures.

Regarding the prospects of retaining the market in these goods in the post-war period, the report states :

"India must adopt modern and up-to-date methods of manufacture if goods produced in India are to sell in this market. If modern machinery is installed in Indian factories and the most efficient methods of production are employed, the comparatively lower cost of Indian goods may be expected to turn the balance in favour of the Indian product .... Till such time as this change-over has become fully effective, India cannot hope to sell her manufactured goods, apart from certain types, in Australia and New Zealand in competition with products manufactured elsewhere."

TRADE LETTERS

(From Our Special Correspondents)

Ahmedabad

THE defective distribution system in the Provinces is retarding the movement of cloth from surplus to deficit areas and creating shortage in deficit areas. It is suggested that the number of permit-holders in the Provinces should be increased, and experienced and reputed merchants should be selected and given permits for procurement and distribution of cloth. The freezing of cloth in surplus areas is not sufficient for checking black markets. The distribution machinery in the deficit areas should be aboveboard and efficient. Government, it is understood, have decided to introduce rationing of cloth in Calcutta as in Bombay, but unless the distribution system is perfected, rationing will not succeed in Calcutta as it has not succeeded in Bombay.

The potent cause of black markets throughout the country—not only in deficit but surplus areas—is the unrestricted activity of ready-made cloth dealers who are free not only to purchase and sell cloth at any price but to move cloth from one area to another. They purchase all the available stocks of cloth in surplus areas at fancy prices and sell them at exorbitant prices in deficit areas. The failure of rationing of cloth in Bombay is attributed to these activities of ready-made cloth dealers. Go ernment are being pressed on all sides to control ready-made clothes dealers who are not even licensed yet. Cloth dealers who were black-marketing have turned ready-made cloth dealers as they can profiteer and black-market to any extent without being checked by the cloth control department. All they have to do is to engage a few tailors and stitch up pieces which can be later cut and sewn to any shape of clothes.

Government have somewhat reduced the rates of dyeing and printing of cloth which were an equally potent cause of black markets. But even these rates have not been sufficiently lowered, and mills are inclined to turn out dyed and printed cloth to a greater extent to add to their profits, even though it is unwanted in the market. Utility cloth which Government have ordered to be manufactured compulsorily is predominantly grey as the rates of grey cloth have been purposely fixed high so as to make its manufacture more profitable than that of bleached cloth. The object of Government is to dissuade mills from manufacturing bleached cloth to save chemicals and fuel. Merchants fear that grey cloth will be unpopular throughout the country which demands finer cloth more and more. The absence of finer cloth will make consumers anxious to purchase foreign cloth as soon as it arrives in sufficient quantity. Government however, it is stated, have promised not to permit import of foreign cloth finer than that manufactured in the country. For the present all the skill developed by mills in producing finer cloth since the end of the last war will be of no use. Let us hope that it will not get rusted and set back the hand of progress of the textile industry.

The Ahmedabad Millowners' Association, which was reluctant to voluntarily refer industrial disputes to the arbitration of the Industrial court in spite of the repeated demands of the Labour Association, agreed to refer to the Industrial Court the question of dearness allowance which they had decided to stop paying after 8th August. The action was taken by the Millowners' Association on the eve of the arrival of Mr. Vallabhbhai Patel who took that body to task for scrapping the old machinery of arbitration which Mr. Gandhi had built up in Ahmedabad. Mr. Patel deprecated the idea of going to the Industrial Court for the settlement of industrial disputes. It remains to be seen if the Millowners' Association acts upto the hint of Mr. Vallabhbhai Patel and resuscitates the old arbitration machinery which worked for nearly two decades. The Millowners' Association and the Labour Association appointed their own arbitrators for the settlement of disputes. The latter appointed an umpire in case they differed. Ahmedabad labour gained a lot by this method of settling disputes and capital enjoyed industrial peace such as was nowhere seen. Peace for an industry is no mean asset which some of the mill agents of Ahmedabad have fully realized and bless Mr. Gandhi for that. They are anxious to restore the old arbitration machinery, and will assert themselves now that both Mr. Gandhi and Mr. Vallabhbhai Patel are free.

Mr. H. P. Oza, M.Sc., who used to contribute articles on Labour to this *Journal* and who was the joint author of " Industrial Labour Welfare " and " Family Employment " has left for America for further studies in electrical engineering.

Indore

Indore Mills: Post-war Planning and Development

AT the second conversational meeting of the local branch of the Textile Association (India) Mr. G. B. Zalani, General Manager of the Rajkumar Mills Ltd., Indore, and the Secretary of the Indore Millowners' Association read a very interesting and informative paper on the subject " Post-war Planning in relation to the Indore Textile Mills. "

Mr. Zalani pointed out that prior to the starting of the war the industry was in a very bad plight but now owing to the prosperous times through which it has since passed, it has the opportunity to create a sound footing for itself. He pointed out that the usual policy of drift—of acting as chances may dictate—should be abandoned and the millowners should plan their future programme on well studied and systematic lines. He then traced briefly the efforts made so far in this direction by the industrialists in Bombay and in Indore. The question of changing their existing power plants was engaging the foremost attention of the millowners. The

Holkar Government had placed before them a proposal for having a central power station from which all mills may be supplied the required energy. This proposal, however, was not found practicable by the mill engineers on account of the difficulty of getting the required processed steam for the departments and so as an alternative the mills are thinking of having their own individual power plants. The Holkar Government had also set up here a Post-war Reconstruction Commerce and Industry Policy Committee which, in so far as the textile industry was concerned, had recommended to the mills a common policy, viz., "to associate and act as one unit, to organize purchases of raw materials and stores, employment and labour welfare, sales, workshop facilities, standardization and division of labour as between the mills, each mill specializing in those sorts which it can produce most economically, rationalization of production and rehabilitation and reconstruction after the war."

It would appear that this recommendation was rather vague, but even here the mills have not so far proceeded to take any practical steps. Mr. Zalani also refered to the various recommendations which the Post-war Planning Committee of the Textile Control Board had so far framed and which consisted mainly of installation of spindles and looms in different parts of India on the basis of various zones into which India is at present divided for the purposes of cloth and yarn production and distribution. The principle underlying the installation of these looms and spindles being that deficit zones should have more spindles and looms according to the needs of their people and consistent with the energy that may be available in the respective zones.

Mr. Zalani then refered to the Cotton Textiles Mission to the U.S.A., known as the Platt Report. He pointed out that the conditions referred to in the report did not apply to India and, therefore, their recommendations could not be adopted, but he said that the report pointed out to us what a long and laborious work we have yet to do in the matter of organization and management of the industry. Mr. Zalani pointed out that to many people post-war planning meant nothing but replacement of a few machineries here and there. He, however, said that this was only one small part of the whole thing and that in his opinion post-war problems should consist of:—

1. Overhauling of buildings and replacement of machinery with a view, as far as possible, to introducing automatic and high speed production and standardization of plants, processing methods and labour.
2. Technical training of staff abroad, including those of industrialists themselves who should study methods of general supervision, management and of forming combines.
3. Labour reorganization, problem of recruiting, fixing hours of work, wage standards, etc.
4. Problem of management, including purchases and sales organizations.
5. Adoption of up-to-date statistical and analytical methods.
6. Research.

In the end he pointed out that the mills should take stock of what they have in respect of their plants and the financial resources available to them immediately and in the following years and determine a policy of gradual replacement of machinery by most up-to-date machinery. He pointed out that total change-over would be impossible on account of the difficulty of getting new machinery and that, therefore, the mills should for the present concentrate on modernizing the existing plants in the best way possible and ordering necessary equipment for the same. He said that another important line in which the millowners should start work immediately was that of improving the existing labour conditions which were very deplorable. This consisted in forming plans for training labour in giving them technical knowledge, determining systematic methods of recruitment and laying down liberal and elaborate schemes of labour welfare and all that goes with it, viz., their education, health, sickness insurance, social security, employment exchanges, etc. He pointed out that the Indore mills were at present working a 10-hour shift and that this would no longer hold on and so from now the mills should formulate proper schemes for working less number of hours per shift and fixing proper wage standards.

He also laid emphasis on the problem of sending technical staff abroad for training and industrialists visiting foreign countries to study methods of general supervision, management, problems relating to organization of labour, methods of forming combines, etc. He said that the industrialists in Indore should immediately tackle these problems and that any delay would be ruinous to the cause of the industry.

Distribution of Cloth

The local Government has arranged for the distribution of cloth imported from Bombay and Ahmedabad in Indore City through 17 shops opened by the local retail merchants' associations with the Government's approval. Every person is being supplied 5 yards of imported cloth for the year ending December 1945. It is learnt that the Gwalior State is also contemplating similar distribution of cloth.

Cawnpore

Textile Association (India): Cawnpore Branch Opened

A BRANCH of the Textile Association (India) has been opened in Cawnpore.

The inauguration ceremony was performed by Mr. E. J. W. Plummer, Managing Director of the Swadeshi Cotton Mills, when over 200 representatives, mostly technical staff from all parts of the Province, were present. The spacious hall of the local D.A.V. College was nicely arranged for the function, and there was great enthusiasm. Messages either regretting inability to attend the function or wishing it all success were received from several people, and were read out.

Mr. H. B. Shroff, Textile Expert to the U.P. Government and Chairman of the Reception Committee, welcoming the members, said:—

"Though the local branch of the Textile Association (India) is commencing to-day, an association of some of the textile technicians has been in existence in Cawnpore, in one form or other, for a number of years. Over 16 years back in

1929 was formed a Dyers, Printers, Bleachers' and Finishers' Association. It held two Dyers Conferences from all over India. The first conference was held in 1933 and was presided over by the then Minister of Education, our present Food Member, the Hon'ble Sir J. P. Srivastava. Its second session was held in 1935. In 1936 this Association extended its scope by converting itself into a Society of Textile Technologists. These bodies did pioneer work, held lectures, ran libraries and reading rooms and published annuals and some books and bulletins.

"A further advance is being made to-day by the joint efforts of local members of the Textile Association (India) and the members of the Society of Textile Technologists, Cawnpore, by constituting themselves as a branch of the Textile Association (India) and thereby further widening its scope and activities covering all technical and administrative members of the textile mills.

"The Textile Association (India), though only six years old, has over 1,500 members distributed widely throughout all the textile centres in the country.

"The activities of the Association are numerous —holding of meetings and public lectures, publishing the *Textile Digest*, organizing libraries and reading rooms, visiting factories, running of employment bureaus, holding of essay competitions in textile subjects, and in woven and printed designs, in addition to social activities.

"The Association has laid down rules for the award of the Associateship (A.T.A.) and Fellowship (F.T.A.) as hallmarks of textile qualifications. It is also proposing to institute examinations of *mistris* and jobbers and to establish a recognized criterion for such posts. The Association is also represented on the Courses Committee of the Association of Principals of Technical Institutes (India). The Association held two very successful All-India Conferences in 1944 and 1945 at Bombay. The proceedings, published in the March 1944 and 1945 issues of the *Indian Textile Journal*, show how keen and great enthusiasm was created amongst textile interests all over India. It has its branches in Sholapur, Khandesh, Indore and its branch at Cawnpore is being inaugurated. As the branches grow strong, it is hoped the venue of the annual conferences will be changing to different textile centres of the country.

"The textile industry of Cawnpore has an important place on the cotton map of the world, particularly of India. Its efforts show how the industry geared itself to meet the war-time requirements. Its production in waste yarns, other yarns and cloth went up by 38 per cent., 30 per cent. and 26 per cent. respectively, over pre-war figures, and this increase is higher than similar increase in all-India figures. This is great credit to the Cawnpore industries and speaks for the tremendous efforts put forth by all the textile technicians working in Cawnpore mills. It is hoped that the activities of the local branch will further in all respects the interests and efficiency of its members and the Cawnpore membership of the Association which to-day is a small one, will increase manifold to cover all those engaged in textile industries of Cawnpore and even of the province."

Mr. Vaidya, the Secretary of the Association from Bombay, who had come specially for the purpose, explained the vital role that the technical staff could play in the advancement of the industry and the welfare of workers. Hitherto technicians were neglected by the employers, and despised by employees. Exchange of ideas and pooling of information would lead to tremendous progress in the industry as well. He also quoted instances of how the textile industry, and textile technologists as a community had their fair share in winning the war in their own way.

Mr. Plummer in a short speech said that, when the history of India's war production came to be written, Cawnpore would occupy an important place in it. But yet it was no time to relax their efforts. The world was to-day facing a cloth shortage such as it had never faced before. India's millions, meagrely clothed as they were, had now to do with even less cloth. Rapid improvement in the situation was not expected.

Technicians and research workers could play a vital part in increasing production. In doing so they would be rendering a national as well as international service.

Over 50 members were enrolled on the spot including some life members. The function ended with light refreshments served on a lavish scale.

Decimalized Currency

Almost all the Chambers of Commerce of the Province have lent their support to the Government of India's proposal to decimalize the Indian coinage system. They consider that the move has not come a day too late, as such a system has been in vogue in most countries for years past. They also plead that sentiment should not be allowed to override logic.

Cloth Rationing

As I reported in my last letter, rationing of clothing has at last been introduced in our city as from 15th July 1945. In order that the scheme may be worked systematically, the city has been divided into several zones and from area to area it is being pushed up. Mill and railway employees who get their food rations from their own establishments get their cloth coupons on presentation of their ration coupon to their own offices. Others who get their food rations from the public ration shops get their coupons at these ration shops on presentation of their food ration cards. To obtain clothing for other workers employed in non-textile concerns, the Employers Association of Northern India has applied to the Textile Commissioner of the Government of India for permission to secure cloth for them. It is felt that several thousand workers belonging to member groups are being handicapped and at a great disadvantage, which has created dissatisfaction in the ranks of the working class.

Cawnpore Improvement Trust

The Cawnpore Improvement Trust which was started in 1919 and been functioning all these years, is to be replaced by a Development Board. It has been felt for some time past that the Trust had fully exploited its resources and there remained very little scope for work. "We will have to make a big effort to pull ourselves out of our present surroundings of filth, squalor, dirt and disease," as a critic observed, and the new Development Board, which has already been formed, is designed to further the work that has so far been carried out by the Trust. Sir Edward Souter, ex-Controller of Supplies, U.P. Circle, is the Chairman of the Board. A Governor's Act sponsored in this connection has been sent to the Governor General and is awaiting sanction. As a matter of fact, it was expected that the new Development Board would come into existence in July or August and the affairs of the old Trust would be merged into that Board.

Woollen Industry

Preliminary arrangements for the resuscitation of the woollen industry in the Kumaon Hill areas of the Province, it is authoritatively stated, have been completed. It may be remembered that Mr. M. C. Pant, M.A., LL.B., then Divisional Superintendent of Industries (now Government Labour Officer), had surveyed and made a special study of the problem and had evolved a scheme for developing this and other industries of those regions. Not only do the Himalayan regions in these areas themselves produce wool, but large quantities of it are also brought every year from Tibet, but the whole trade was in a thoroughly unorganized state, and there was lot of waste at every stage of the transaction. Mr. Pant had emphasized the need for the successful working of the scheme, organization of this on co-operative lines, and it is now refreshing to read that in addition to co-operative societies "better living societies" too are being organized which it is hoped will give a fillip to the neglected hill industries of the Province.

All-India Silk Conference

Information received here shows that an All-India Silk Conference, sponsored by Mr. V Sundaramurthy, President, Vellum Parachute Silk Factory, Mysore, and several others interested in the line will be held some time in the cold weather at New Delhi over which the Hon. Sir A. Ramaswami Mudaliar, Supply Member to the Government, will preside. The object of the Conference is to discuss and arrive at some concrete and practical decisions and to formulate a plan of action for the growth and development of the silk industry in India on the right lines in keeping with the immense potentialities of the industry in this country. Mr. Sundaramurthy appeals to all interests to attend the Conference and help the formulation of a united plan.

Calcutta

Cloth Economy Drive

THE introduction of rationing of cloth will not remove the need for economy. So far as can be foreseen, the ration will be small and certainly inadequate for the maintenance of the normal peace-time standards of dress. The utmost possible economy of existing garments will, therefore, need to be exercised.

These observations are made in a circular issued by Mr. A. de C. Williams, Civil Supplies Commissioner, Bengal, to all clubs, industrial and trade associations, chambers of commerce and other bodies.

In the present shortage of cloth, says the circular, the Government feel that conventions should be relaxed as far as possible to secure economy. The Government do not wish to put forward any hard and fast formula or to indicate precise verbal alterations of existing rules and regulations.

The object is to relax conventions and restrictions in such a way as to enable the individual to use and wear out the clothes which he has and so avoid the necessity of purchasing new clothes for what are, after all, largely conventional considerations. If an individual has a number of coats let him wear them, but it is undesirable that an individual should in present conditions be practically forced by his office or club rules to purchase new coats or wear out a coat which would be better reserved for special occasions.

Bengal Governor on Cloth Position

An assurance that cloth rationing would come into force before the *Pujas* was given by H. E. the Governor, Mr. R. G. Casey, at a recent Press Conference held at Government House, Calcutta.

Rationing is proposed to be introduced in Calcutta only. So far as the rest of the province is concerned, arrangements will be made for equitable distribution of cloth on family ration-card basis.

When His Excellency's attention was drawn to reports appearing in the Press about men and women commiting suicide for want of cloth, he said he had seen such reports.

Asked if full-fledged rationing of cloth would be introduced in mofussil areas also so that these unfortunate incidents might not occur, Mr. Casey said he was very much sceptical about the suicide cases.

In every country, he said, there were some suicide cases, be it for cloth or for any other thing. He, however, promised to make inquiries in the matter. For the present he was quite satisfied with the reports regarding distribution of cloth on family ration-card basis in mofussil areas, and Government were trying their level best to distribute cloth on an equitable basis.

His Excellency said that the needs and claims of Bengal in respect of an increased quota of cloth for Bengal were constantly pressed upon the Government of India. Efforts were also being made to increase the supply of handloom products from outside the Province, particularly from Madras.

Protest Against Cloth Export

With reference to a Press report of a statement made by a member of the Australian delegation to U.N.R.R.A. at Karachi on 17th July last that India was to provide clothing for the destitute population of European countries, the Committee of the Indian Chamber of Commerce, Calcutta, have addressed a telegram to the Government of India requesting information as regards the authenticity of the Press report.

In this connection the Committee invite the attention of the Government to the statement of Mr. F. B. Sayre, Diplomatic Adviser to the U.N.R.R.A. Mission, at a Press Conference held at Simla on 13th July last, that it was not proposed to take from India goods or foodstuffs which Indian people were in need of themselves. The Committee observe that the Government of India must be aware of the acute cloth shortage in the country and the strong public opinion against cloth exports at this juncture.

The Committee trust that Government would not export cloth as part of India's relief measure to Europe. The Government are also requested to give an immediate assurance to the public in this regard.

Bengal's Demand for Madras Handloom Cloth

According to a Press report, great demand coupled with consequent high prices offered in Bengal for Madras handloom cloth, has led to an abnormal increase, of late, in the number of looms in that Presidency, and this in turn has added to the present difficult yarn situation caused by want of transport facilities.

The Government of Madras, it is reported, are taking steps to increase the productive capacity of mills in the Province and to accelerate rail transport movements as much as possible.

The quantities of yarn available at present, says a Government Press Note, are sufficient at present for all the looms which were in existence in 1944. Every effort is being made not only to ensure that those in the trade upto that date receive their normal requirements, but also to ensure that any black-marketing tendencies at any stage are eliminated.

Madras is ordinarily a surplus area as regards medium and coarse counts of yarn; and in the All-India Yarn Scheme introduced in April last Madras is under an obligation to export to other provinces a quantity of such counts. In higher counts, there is some scarcity at present owing to stoppage of imports into this province and weavers are being, therefore, advised in their own interests to take to the weaving of lower counts.

Over 700 looms in the Washermanpet area of the city of Madras are at persent mainly engaged in working on *lungies* for export to Bengal.

Move to Increase Yarn and Cloth Production

Mr. G. N. K. Iyer, Assistant Textile Commissioner, visited almost all cotton mills in Bengal.

Mr. Iyer was sent to Bengal by the Textile Commissioner to implement the provisions of the Textile Industry (Control of Production) Order, 1945, and as a result of changes effected in the working of mills an increase of 1,000 bales of yarn and cloth per month are anticipated compared to what the mills are now supplying towards civil requirements.

Interim Calcutta Cloth Rationing

For people who draw their food rations from employers' shops, full-fledged cloth rationing has come without any question of selection or priority. Cloth ration (A) will be distributed through the employers' shops to all—men, women and children—on the basis of their food ration cards. Ration for children (below 12) is smaller. Only those who have already got their first ration (cloth ration A) cannot get a further quantity just now.

Distribution of cloth through employers' shops will cover about a million and a quarter people, which is roughly one-third of Calcutta's population. The rest, for the present, will get their cloth through the Ward Committees.

The scheme applies generally only to employers who run their own food ration shops or stores under the food rationing scheme. All employers of labour within the Extended Food Ration Area may now indent for supply of cloth for the issue of cloth ration (A) to their employees and their dependents registered at their shops or stores.

Yarn for Handlooms

Manufacture of cloth on the handloom is an important factor in Bengal's economy, says a Press announcement. In making allotment of cloth to Bengal, the Central Government take into account the loom production of this province; and the same is taken into consideration by the Bengal Government in making allotment of cloth to the districts. On an average a bale of yarn weighs 400 lbs. and 1 lb. of yarn produced 4½ to 5 yards of cloth.

Bengal's present monthly quota of yarn for handlooms is 7,100 bales and this is distributed on a scale of 24 bales per thousand looms, the balance being distributed to miscellaneous fabricators of handloom cloth.

In order to maintain the specialized production of fine cloth for which certain areas are noted, an increased proportion of fine count yarn is sent to these areas out of the small total of fine count yarn available to this province.

During the period 19th May to 18th June 1945, the total quantity of yarn despatched was 5,486 bales.

Plea for No Control of Handloom Cloth

The plea that cloth control and distribution in Bengal will only become successful when handloom cloth is also controlled will be seen to be fallacious and erroneous and this will only lead to a fresh and serious bungling. In fact, the handloom cloth in circulation is easing the gravity of the situation to a considerable extent, says Mr. E. K. J. Sarma, Joint Secretary, South India Handloom Cloth Merchants' Association, Calcutta, in the course of a communication addressed to the Director-General of Consumer Goods, Bengal.

While welcoming the introduction of cloth rationing and equitable supply to consumers in Bengal, the communication adds that handloom cloth is manufactured all over the province and Madras has developed the industry on a good scale. Any deficiency in stock position may be easily made good by this commodity and any attempt at controlling it will worsen the situation.

It is understood that Mr. W. S. C. Tully, Director-General of Consumer Goods, Government of Bengal, has informed the Association that the points mentioned in their communication would be taken into careful consideration before completing the relevant scheme. He also points out that there is no real comparison between the position in this province and that in the province of Madras, as Madras has an abundant quantity of handloom products, so much so that it is in a position to export.

Bengal to Produce More Cloth

Bengal's 30 mills, which have been producing 8,000 bales of mill-made and 2,000 bales of handloom cloth, will now increase their output by an additional 1,000 bales of cloth and 1,000 bales of yarn, or, in other words, by 1,500,000 pairs of *dhotis* or *saris* per month. This has been made possible by allowing the mills to work an hour or two extra every day.

Since 1st June 90 per cent. of the civilian production capacity of the textile mills in India has been harnessed to the manufacture of general utility cloth. In connection with the drive for increased production, Mr. G. N. K. Iyer, Assistant Textile Commissioner, Government of India, has been assured of the millowners' co-operation and the assistance of the coal control authorities who, it is understood, have arranged increased supply of coal to the mills, as well as the help of the Labour Commissioner and other Bengal Government officials.

Extra Cloth for Calcutta

The Bengal Millowners' Association have decided to work the new scheme of Government enabling the latter to supplement their stock of cloth for rationing in Calcutta.

This new scheme, as explained by Mr. J. S. Gilks, Deputy Director of Textiles, is to hand over the products of the mills to authorized dealers under Government supervision on the assurance that prompt payment would be arranged by Government.

Mr. Gilks appealed to the millowners to cooperate with the Textile Directorate in their efforts to provide the maximum quantity of cloth for the people of the province.

Fifty Per Cent. Increase in Bengal's Quota of Yarn

An announcement of the Bengal Civil Supplies Department says that in making allotment of cloth to Bengal, the Central Government are debiting 154 million yards on account of the estimated handloom production in this province. To this end, Bengal has been allotted yarn for handloom weavers. Under the present All-India Yarn Distribution Scheme, Bengal's quota is 7,100 bales of yarn per month.

For distribution among the non-spinning mills, hosiery factories, miscellaneous fabricators and fishermen, there is a further allotment of 540 bales of yarn per month.

The Government of Bengal have represented to the Central Government the utter inadequacy of the present quota, inasmuch as:—

(*a*) Although 7,100 bales of yarn have been allotted for handloom production, the actually useful quantity is less by one-third because it consists of yarn of counts below 20s which is unsuitable for handloom production.

(*b*) The hosiery trade of Bengal would be in danger of extinction if a sufficient quantity of yarn were not forthcoming.

(*c*) Yarn allotted for distribution to the non-spinning mills, miscellaneous fabricators and fishermen is quite inadequate.

It has now been agreed that so far as handlooms are concerned the 7,100 bales allotted will be of counts of 20s and over, thus making it possible for the weavers of this province to produce the estimated 154 million yards of cloth.

It has been agreed that over 1,300 bales (2,600 cases) of yarn would be made available every month for hosiery goods.

An allotment of 3,000 bales monthly will be made available to this province for non-spinning mills, miscellaneous fabricators and fishermen. The new arrangements mean an increase by 50 per cent. in Bengal's quota of yarn.

The Central Government, the announcement concludes, have accepted in principle the increased figures of yarn quota to Bengal; but they have pointed out that as the yarn supplies in India are insufficient at present, it will not be possible to send the additional quantities immediately. But cloth production is being rationalized and other sources (including the Bengal mills) are being investigated and it is hoped that an increased quantity of yarn will be forthcoming to permit this increase of over 50 per cent. in Bengal's yarn quota. Meanwhile, the Central Government have given an assurance that everything possible would be done to augment the present supplies to Bengal by *ad hoc* allotments.

Interim Distribution of Cloth in Calcutta

Out of an estimated total of 1,600,000 adults of Calcutta who are to be served with a unit of one ration (a *dhoti* or *sari*, or 3½ yds. of shirting) each under the interim cloth distribution scheme before full rationing is introduced in the city, 231,241 got their quota upto 24th June. The number of persons who had already secured permits but did not draw their rations up to that date was 77,441. The interim distribution scheme has been in operation since 7th May.

Out of 747,498 permits given to the different ward committees by the Government, 308,682 were issued to the public.

Some 2,733 bales containing *dhotis*, *saris* and other varieties of cloth, were supplied to the 300 shops through which distribution is being made. Bales in stock for distribution on 24th June amounted to 1,676.

Order on Cloth Dealers

The Director of Textiles has issued an order under the Bengal Cotton Cloth and Yarn Control Order.

It says: "No dealer in Calcutta selling, delivering or offering to sell or deliver any Indian mill-made cloth from any shop appointed in writing by the Director of Textiles to be a cloth ration shop or under specific orders of the Director of Textiles in pursuance of the directions issued by the Director-General, Consumer Goods, shall make any cloth obtained by or supplied to such dealer after the date of this Order into garments or use any such cloth otherwise than for the purpose of such sale or delivery."

Sale of "Khaddar"

The Secretary, All-India Spinners' Association, Bengal branch, has issued the following statement:—

"As per resolution passed by the Central Council of the All-India Spinners' Association, all *khadi* purchasers will have to pay on and from 1st July 1945 at least two pice per rupee in handspun yarn. This yarn should be spun by the customer himself, his family, his friends or his neighbours. This system of exchange has been introduced with a view to promoting self-sufficiency among the wearers of *khadi*. Those *khadi* wearers who do not spin for themselves should learn to do so and ultimately get their necessary cloth woven from their own yarn. The present limit of the exchange, two pice worth yarn per rupee, is the minimum, but will be increased step by step as time goes by till the maximum is reached when *khaddar* will be given in exchange not of money but of yarn alone.

"For the convenience of all concerned the price of 160 yds. of good yarn has been fixed at two pice. The workers and sale men in sale *bhandars* will always be at the service of the public for giving them necessary information and assistance. We appeal to all lovers of *khaddar* to co-operate with us in making our self-sufficiency project a success."

Cloth Syndicate for Bengal

Amongst the various proposals mooted in regard to an effective scheme for satisfactory distribution of cloth in Bengal, maximum support has gone to the idea of forming a cloth syndicate by traders themselves to take over the entire distribution in the province. Recently such a cloth syndicate was proposed to be formed with a capital of Rs. 6 crores subscribed by traders and with a directorate composed of the representatives of different chambers of commerce in Calcutta and a few taken from among the dealers themselves. The proposal, it is stated, has been in abeyance owing to lack of agreement among traders.

In Calcutta the members of the Textile Control Board will meet different trade organizations and find out the trade viewpoint in regard to distribution and how their co-operation can be secured. It is possible that the cloth syndicate idea may again be revived if found suitable and if there is sufficient agreement among traders themselves. According to opinion in commercial circles, such a syndicate if formed may be in a position to check black marketing up to the stage of wholesalers after which, however, it is considered that the Government must step in and regulate sales from retailers to consumers.

Asked at a Press Conference if it was a fact that a syndicate of big capitalists was being formed with a view to buying and distributing cloth on behalf of the Bengal Government, the Governor of Bengal said the matter was in the course of negotiations. Government were taking into consultation the chairmen of various chambers of commerce, and he hoped every community would have a satisfactory share in the proposed syndicate.

Government's intention was that the terms and conditions under which the syndicate would be asked to operate would be such as would eliminate black marketing. The necessity for such a body had arisen because Government felt that one unit and not many should deal with the whole cloth trade under Government's supervision and control. He added that if the scheme materialized, the handling agents would have no function as such, but it was proposed that they would serve as a link in the organization in some form.

Bengal Silk Control Order Amended

The registration of traders in raw silk and owners of filature or *charka* establishments is prescribed in an order called the Bengal Silk Control Order, 1945, issued under the Defence of India Rules, which repeals the Bengal Silk Control Order, 1943.

The Order lays down that no filature or *charka* establishment shall, after the commencement of this Order, be operated unless the person owning it has been or is deemed to have been registered.

No person shall, after the commencement of this Order, trade in raw silk unless he has been or is deemed to have been registered as a trader in raw silk.

No person, whether or not he is a registered owner or a registered trader, shall purchase any raw silk except under a permit issued in this behalf by the Provincial Controller or the District Controller nor shall any such person sell any raw silk to any person other than a Government officer authorized in this behalf by the Central Government or any agent appointed in his behalf by Government.

No cocoons shall be sold or purchased by any person or in any way transferred from one person to another or utilized in any manner by any person except under and in accordance with the conditions of a permit issued in this behalf by the Provincial Controller or the District Controller.

No person shall import from outside Bengal any raw silk for sale or transfer nor shall any silk imported by any person from outside Bengal be disposed of by such person without obtaining a permit.

Development of Silk Industry in Bengal

The Government of Bengal, it is understood, have appointed Mr. C. H. Gordon, I.C.S., formerly District Magistrate of Malda, as Special Officer for Silk with a view to examining the possibilities of reorganizing and reviewing the silk industry in Bengal, as part of the post-war reconstruction plan.

Smuggling of Cloth

The Supply and Transport Department of the Orissa Government are taking stringent measures to stop the smuggling of cloth out of the province. Such smuggling is reported to be carried on mainly in the direction of Bengal. The enforcement staff inspecting the luggage of outward-bound passengers in all trains at important stations in Orissa are reported to have detected several cases of smuggling of cloth during last week.

Surprise raids with the help of the police are being carried out. More than twenty cases have been detected. Large quantities of cloth valued at several thousands of rupees are reported to have been seized and arrests made for alleged contravention of the Government notification banning the movement of cloth outside the province.

A strong check is also being kept on wholesale and retail dealers of the province to detect malpractices.

Bengal Sales Tax Enhanced

The Provincial Government has decided to increase the rate of the tax on the sale of goods imposed under the Bengal Finance (Sales Tax) Act, 1941, from one half of an anna in the rupee to three-quarters of an anna in the rupee. No change will be made in the schedule of exempted goods. A law amending the said Act for this purpose has been brought into operation with effect from the 25th June 1945.

In the course of a communication to the Government of Bengal, the Committee of the Indian Chamber of Commerce, Calcutta, protest against the above decision of Government.

Bengal's Post-war Plans

Lieut-General Sir Thomas Hutton, Secretary, Department of Planning and Development, Government of India, accompanied by Mr. V. Narahari Rao, Additional Secretary, Finance Department, Government of India, were in Calcutta for a few days for discussing the Bengal Government's post-war plans in detail with the Post-war Reconstruction Department and the Secretaries of the Development Department of the Government of Bengal.

Jute Forecast for Bengal

The following is the preliminary official forecast of jute crops of Bengal for 1945:—

In Bengal (excluding the States of Cooch Behar and Tripura) licences have been issued for 2,546,925 acres as against 2,563,270 acres licensed and unchecked area shown in the preliminary forecast of 1944 and as against 1,694,355 acres actually found to have been under the crop as returned in the final forecast of 1944. Out of the total licensed area of 2,546,925 acres an area of 438,180 acres has since been checked and 2,108,745 acres still remain to be examined. Out of the checked area jute has actually been found to have been grown on 362,025 acres. Thus the percentage of the area actually found grown to the total area checked to date is 82.6 and so far something like 17.2 per cent. only of the total licensed areas has been checked.

Sowings generally commenced in normal time though at places, particularly in some West Bengal tracts, it was delayed due to drought. Weather conditions have generally been favourable although occasional drought interfered with the agricultural operations at places and affected the growth of the crop at its early stage.

The present condition of the crop is satisfactory. Stock in the hands of the cultivators is small.

Central Jute Committee Meeting

A new scheme to explore the possibilities of evolving better species of jute by subjecting them to X-rays, neutrons and gamma rays, submitted by the Bose Research Institute, costing about Rs. 20,000 for three years, was accepted by the Indian Central Jute Committee at their monsoon meeting, with Mr. H. R. Stewart, I.A.S., in the chair.

Members representing the Governments, growers, and the trade in the four jute-growing provinces and the Dacca and Calcutta Universities were present.

The old research schemes of the Universities relating to impregnating bleached jute fibre with a synthetic resin with a view to improving its textile qualities, investigations on the chemical utilization of jute waste, and X-ray analysis of the jute fibre, sponsored by Prof. J. K. Chowdhury, Mr. B. C. Guha and Prof. M. N. Saha, respectively, were decided to be continued for terms extending from one to three years. An extension was also granted to Prof. B. C. Guha's research scheme for biochemical investigations on the processes involved in the retting of jute.

The Committee's scheme at Narsinghdi for try-out on a wider scale, under cultivators' conditions, the practicability of measures devised at the Dacca Laboratories, to control the pests and diseases of jute was decided to be continued for another term of three years.

To remove the prevalent dearth of improved jute seed in Bengal, the Committee agreed to the proposal of the Director of Agriculture, Bengal, to help the Bengal Government in establishing a large jute seed multiplication farm in the province. The Committee decided to make a grant of Rs. 50,000 to the Bengal Government as a permanent advance for five years in this connection, subject to the India Government's approval.

In order to assist the jute cottage industry in Bengal in marketing their products, which are quite useful in their line, it was agreed that two co-operative societies of cottage workers should be established in Bengal for two years in the first instance. It was in this connection suggested that the societies should try to obtain the sympathy and co-operation of the Bengal Industries Department in the task of improving the processes of spinning, dyeing and weaving.

The Jute Grading Sub-committee's recommendation with regard to the commercial grading of raw jute on a five-grade basis was approved. It is understood in this connection that at the instance of the President of the Indian Jute Mills' Association, who is also Vice-President of the Indian Central Jute Committee, a meeting of the various interests concerned is soon being called, with a view to getting the new scheme adopted by the trade, after modifications, if necessary, with effect from the next jute crop season.

Jute Manufactures in June 1945

The despatches of jute manufactures from mills during June amounted to 89,533 tons compared with 119,028 tons in June 1944, and 95,627 tons in June, 1943.

The total despatches for the year July/June, were 1,018,717 tons in 1944-45, 1,034,332 tons in June 1943-44 and 1,181,453 tons in 1942-43. In the past two years despatches have exceeded output but in 1942-43 production was greater than despatches. In June 1943 mill stocks of manufactures were at just about their highest level.

Taking the reported production of manufactures as the basis, the consumption of raw jute in June amounted to approximately 494,000 bales, compared with 478,000 bales in May. In June, 1944 the consumption was 526,000 and in June 1943, 536,000 bales. The total quantity of raw jute consumed in the season 1944-45 was 5,599,000 bales.

Exports of raw jute from Calcutta during the month of June were 103,000 bales, compared with 96,000 bales in May. The total for the season now stands at 1,039,000 bales. The increase in shipments in June was due to export to France and other continental ports and it is expected that shipments in July will also make a good showing.

Full Cloth Rationing Scheme for Calcutta Area Ready

A scheme for full cloth rationing in the Calcutta rationed area is now complete and will be put into operation as soon as necessary forms and registers are printed and other arrangements made.

This was announced by Mr. P. J. Griffiths, Director-General of Enforcement and Civil Supplies, Bengal Government, at a Press conference in Calcutta on the 26th July 1945.

No date for the introduction of the scheme was given. It is, however, understood that over a month may yet elapse before it comes into force.

The ration for the first nine months after introduction has been fixed at 20 yards per head for adults, to be available in instalments. The allotment for the remaining three months of the year will be determined later. Children up to 12 will be allowed half the ration of an adult.

The following varieties of mill-made cloth will be rationed: *Dhotis*, *saris*, *lungis*, mulls, voiles, nainsook, coating, drill (bleached, grey and dyed), shirting, longcloth, twill, poplin, markin, crepe, pagri cloth, mulmul, salu, prints, chaddar, sujni, bed covers, sheeting, bed ticking and blankets.

Ready-made garments and handloom products will not come under the scheme.

The rationed cloth will be distributed through about 600 selected shops, apart from employers' establishments.

Mr. Griffiths said that during the week following the day when the interim distribution scheme comes to an end, every permanent food ration-card holder the number of which ended in the digits 1, 2 or 3 will, when he draws his food ration, be given a cloth ration folder containing 30 coupons.

In the case of permanent occupants of residential establishments and institutions, special arrangements for the issue of identity cards, on production of which cloth ration folders would be issued, were being made.

The validity of a folder will commence 14 days after the date of discontinuance of the interim scheme which will be announced shortly. From the date of the commencement of validity, which will be known as "R" Day, the Rationing Directorate will assume responsibility for rationing of cloth.

The value of each coupon being one yard, the first 10 coupons will be valid during the first quarter of the year after "R" Day. To spread the demand as evenly as possible throughout the quarter, each individual will be assigned to one or the other of the three months of the quarter. Those whose food ration cards ended in the printed number 1, 2 or 3 will be entitled to draw their cloth ration in the first month of the quarter; those with cards ending in 4, 5 or 6 in the second month; and others in the last month. The allotted ration may be taken either in one or more instalments at the convenience of a person.

Coupons 11 to 15 and 16 to 20 will be valid during the second and third quarters respectively, and divided up among the months in the same way as the first ten coupons. Cloth unused at the end of a quarter might be carried over to the next.

The maintenance of the ration at the proposed rates will depend on the stock position, and although the Government hoped to adhere to this scale, they reserved the right to alter it if circumstances made it necessary. In deciding the ration for the last three months, the authorities will be influenced by consideration of the position outside Calcutta at that time.

Every ration-card holder will be attached to a shop duly registered against his name. Shops selected for distribution will be grouped into A and B classes catering for about 10,000 and 5,000 persons, respectively. Every shop will be supplied with all varieties of rationed cloth.

An extra issue of 20 yards of cloth will be made available on the occasion of the death of a cloth ration-card holder for the shroud or for the use of mourners. The necessary permit will be issued on production and surrender of the food ration card and the cloth ration folder of the deceased or other reliable evidence of death.

To prevent delay in dealing with such applications, arrangements will be made to keep a few special shops open day and night for this purpose. If cloth more than 20 yards is required in connection with a death, certain relatives of the deceased will be entitled to draw their next quarter's supply in advance.

South India

Textile Industries in Hyderabad

THE establishment of new yarn and cloth depots, wool spinning and weaving centres and the organization of demonstration parties are some of the special features mentioned in the Administration Report of the Commerce and Industries Department of His Exalted Highness the Nizam's Government for the year 1353 Fasli. The report states that "at present a scheme for the revival of the handloom industry and its establishment on a permanent basis is receiving the attention of the department."

During the year under report two new yarn and cloth depots were established in the districts which were affected by famine. These depots received yarn from the mills and despatched them to producing centres. Apart from these, two wool spinning and weaving centres in the districts and one milling centre at the Village Industries Training Centre, Hyderabad, were established. In addition, 400 improved wool spinning *charkhas* were also introduced among cottage workers. The report further states that, since the inception of the scheme, 193,126 lbs. of wool valued at Rs. 79,956 was purchased direct from the dhangars and 29,336 blankets valued at Rs. 2,04,936 were manufactured, of which 19,786 blankets valued at Rs. 1,52,492 were supplied to the Government of India and the balance sold in Hyderabad. The net profit till the end of Amardad 1353 Fasli amounted to Rs. 9,564. The district demonstration parties, with the help of additional staff, organized 15 production centres to manufacture fabrics required mostly for war purposes and to a certain extent for civilian requirements.

Two thousand and eight hundred looms, as against 2,875 in the preceding year, were engaged in the production of cloth during the year under review. Orders to the value of about Rs. 3,07,410 were executed during the year as against Rs. 4 lakhs in 1352 Fasli. In addition to this, local requirements valued at more than Rs. 4 lakhs were fulfilled.

In the Village Industries Training Centre a new section for the training of boys in the art of gem cutting was added and four students were receiving training at the end of the year. The Carpet Factory at Warangal and the Weaving Institute at Paithan carried on their usual work of manufacturing carpets and embroidered *sari* borders, turbans, etc., respectively.

In conclusion, the report states that owing to the exigencies of war, several control orders were enforced which dealt with production, transport and distribution of a large number of articles required by local industries for carrying on their work.

Development of Sericulture in Mysore

The Administration Report of the Mysore Sericultural Department of the State for 1943-44 states that 69 lakhs lbs. of cocoons were purchased and sold in the cocoon markets during the year. The surplus realized from the sale of silk under the provisions of the Silk Control Order was distributed equally among the rearers and reelers and part of it was credited to the Silk Development Fund.

The report adds that the new scheme for filature expansion was making satisfactory progress. The Government sanctioned the opening of a fully equipped sericultural farm at Doddabalapur and a scheme for the expansion of sericulture industry in the Honnali taluq.

Sericulture in Sandur

Mr. A. Ramachandra Rao, Assistant Sericulture Expert from Kollegal, Coimbatore District, has gone over to Sandur State for investigating the possibilities of mulberry cultivation and silk-worm rearing in the State.

Increase in Number of Handlooms

The Madras Government have issued a Press note to dispel some misapprehension which, they state, has been created by Press reports on the distress among weavers. Inquiries show that 717 out of 767 looms in the Washermanpet area were working on 12th July mainly on *lungis* for export to Bengal. In 1942, Government introduced a system of licensing yarn dealers with the main objects of arresting distress among weavers, of systematizing yarn distribution on an equitable basis and of eliminating speculators in the yarn trade. This system was expanded during the following two years; and in April 1945 an all-India yarn scheme was introduced under which the Madras Presidency, being ordinarily a surplus area as regards medium and coarse counts of yarn, is under an obligation to export to other provinces in India certain quantities of such counts.

The question of the exact amounts to be exported in relation to the genuine requirements of the Presidency is at present engaging Government's attention. In higher counts, there is some scarcity at present owing to stoppage of imports into the Presidency. Weavers are being advised in their own interests to take to the weaving of lower counts. Such difficulties as are at present being experienced from time to time by weavers in different localities are due to difficulties of rail movement, and not to maldistribution.

Another very real difficulty which Government are combating by carefully controlled distribution to *bona fide* weavers, is the abnormal increase recently in the number of looms in the Province due to the high remuneration available from absence of control over the prices of handloom products and due to the great demand, coupled with consequent high prices offered, for cloth imported into Bengal from the Presidency.

The Government are taking steps further to increase the productive capacity of mills in the Province and to accelerate rail transport facilities as far as it is within their power to do so. The quantities of yarn available now are sufficient for all looms which were in existence in 1944; every effort is being made not only to ensure that those in the trade up to that date receive their normal requirements, but also to ensure that any black-marketing tendencies at any stage are eliminated.

Yarn is distributed on a system carefully based on district statistics as to the number of working looms; and local distribution committees consisting of representatives of local millowners, yarn merchants' associations, chambers of commerce, consumers and weavers, have been constituted wherever possible throughout the Province to advise the local officers of the Textile Department as to the equitable distribution of the quotas available.

Buckingham and Carnatic Mills

The Madras Government have passed orders on the award of Rao Bahadur M. Venkataramayya retired District Judge, who had been appointed by Government to adjudicate in the trade dispute between the management of the Buckingham and Carnatic Mills and its workers. There were seven points referred to in the adjudication, of which three were given up and the award was given on the remaining four.

Regarding the first point relating to the working of the twelve-loom system, the adjudicator found it to be very straining and recommended that each weaver should not be placed in charge of more than six looms. The management have agreed to the abolition of the system and the revival of the six-loom system. The Government have accepted the recommendation, subject to the condition that these workers could not claim the privilege of making purchases in the work-people's stores, in view of the practical difficulties pointed out by the management in regard to the procurement of the necessary stores.

Regarding the adequacy of the existing wages the adjudicator has recommended the setting up of a wage board, consisting of representatives of the employer and employees, together with an impartial individual to fix the wages of the workers. The Government think that no action need be taken now as the wages of the workers would be revised as a result of the first recommendation of the adjudicator and as wages would have to be fixed for the entire textile industry in the Province on a more or less uniform basis and as the question of setting up of wage boards was now under the consideration of the Government of India.

Regarding dearness allowance the adjudicator has recommended an enhancement of the allowance by As. 8 a month to each of the workers whose income is less than Rs. 30 a month. The adjudicator observes that the management were quite generous in the matter of granting dearness allowances to their workers as compared to several firms and that the rate was the highest in Madras. In the circumstances, the Government do not consider it necessary to force the management to meet the extra expenditure recommended by the adjudicator.

The Government have ordered that the above decisions shall be binding on both the management and the workers for a period of one year under the Defence of India Rules.

Silk Industry for Ceylon

It is learnt that the Ceylon Government have decided to establish sericultural research farms at three places in the Island and for this purpose Rs. 1,53,437 is included in the supplementary estimates introduced in the State Council. In December 1943, the Ceylon Government appointed Mr. K. T. Acharya, who had retired from service as Sericultural Expert to the Government of Madras, to carry out a survey, and report on the possibility of establishing a sericultural industry in Ceylon.

Mr. Acharya expressed the opinion that conditions in Ceylon were favourable for the development of the mulberry industry, that a successful cottage industry could be established in Ceylon, that experimental farms for the cultivation and regular supply of mulberry cuttings and for rearing silk-worms and supply of disease-free seeds should be established immediately and that a filature could be established in due course, possibly in three years' time, when a good, regular supply of cocoons started to come in.

The Executive Committee of Labour Industry and Commerce has decided that it is worth while to undertake the scheme, and start three experimental stations.

The total cost of the scheme for a period of three years and four months is estimated at Rs. 3,73,370. It is expected that at the end of this period a filature will be established to convert cocoons to raw silk on a commercial scale and the scheme may be expected to pay its way from this stage and can be financed from an advance account.

Madras Raw Cotton Statistics

The receipts of loose cotton at presses and spinning mills in the Madras Province from 1st February 1945 to 16th June 1945 amounted to 261,357 bales of 400 lbs. lint as against an estimate of 246,400 bales of the total crop of 1944-45, reports the Director of Agriculture, Madras. The receipts in the corresponding period of the previous year were 207,953 bales. 255,186 bales mainly of pressed cotton, were received at spinning mills and 9,315 bales were exported by sea while 63,181 bales were imported by sea, mainly from Karachi and Bombay.

Revision of Prices of Raw Silk

A deputation representing the Mysore Raw Silk Merchants' Association and proprietors of silk-throwing factories and silk weaving factories in the State, led by Rajasevasakta P. Subbarama Chetty, made representations to Mr. L. Siddappa, Minister of Industries, in regard to the proposed fixing of prices for silk fabrics by the Government of India (who have already fixed the prices for raw silk), and urged him to constitute a non-official committee representing various silk interests in the State for the purpose of making suggestions to benefit both the consumers and the industry itself. The deputationists stated that the matter was urgent, as the Government of India might take an early decision and it was necessary that expert non-official opinion should be placed before them before such a step is contemplated.

The deputationists presented a memorandum to the Minister setting forth the considered views of the silk interests that the control system intended for the benefit of all interests concerned had not proved a great success, and that it were better that free trade was permitted.

Since the Government had stopped the auctions of raw silk in the State and the prices had been fixed, the deputation suggested that the Cocoon Control Order should be withdrawn, with a view to putting an end to the present undesirable evils, resulting not only in the deterioration of the quantity of cocoons but also in possibilities of black-marketing. They also pleaded that the reelers should be paid either the full value according to the price fixed by the Government of India, or about 5 per cent. lower to cover charges for the collection work at various depots, since the reelers would then be induced to produce better qualities of raw silk, and the industry would greatly benefit thereby. They urged that the Government of India might be approached to revise the rates, since the present rates were not fair.

Adverting to the question of distribution, they requested the Mysore Government to make suitable representations to the Government of India and the Governments of Bengal and Kashmir to allot a fair quota of Bengal silk, Kashmir silk and China silk for the State, if the Government of India permitted such importing. They also recommended that the filature silk should not be allowed to be exported out of India until such time as the output of cloth was sufficient for India. If, however, the Government thought it necessary to secure markets for the post-war period, they suggested that the manufactured fabrics might be permitted to be exported in such proportion as not to affect the cloth situation in the country.

E

Commercial and Technical Organizations

Indian Merchants' Chamber, Bombay

Visit of Chief Controller of Exports.—Mr. K. G. Menon, M.B.E., I.C.S., Chief Controller of Exports, Government of India, met the Import-Export Sub-Committee of the Indian Merchants' Chamber on Friday, the 27th July 1945. Questions relating to Indian export trade such as the future of the export control, retention of normal channels of trade for purposes of exports, securing fair prices for Indian export goods, basis of allowing exports to the liberated countries, purchase of oilseeds from India by the British Ministry of Food, export of magnesium chloride from India and restrictions on exports of black pepper, printed material, etc., were discussed.

The country has felt that export controls were not being exercised in the national interest during the war, and now that the war in Europe is over they want that the export controls should go. Their removal should be carried out in such a way as to stimulate the industrialization of the country. No raw materials or semi-finished products or foodstuffs should be allowed to leave the country. A suitable export policy must be evolved for capturing India's lost export markets and re-opening new markets.

The Chamber draws attention to the fact that large areas are being liberated from the enemy and stresses the importance of restoring to the original channels the trade that before the war belonged to them; they are anxious that official or semi-official agencies like the U.K.C.C. or the M.E.S.C. should not be allowed to supersede or forestall them. The Chamber has expressed itself also against the establishment of foreign purchasing missions in India and the organization of centralized purchases by the importing country. This development should be checked and Indian exporters given a free hand. "Whatever may have happened in the past, it is essential to ensure that the prices for Indian export goods and the terms and conditions under which export business is to be carried on in the future should not be subject to any measure of outside interference or official control." The prices should be determined by the play of normal trade factors and foreign Governments or purchasing agencies should have no say in fixing them.

War Taxation in India.—In the course of a memorandum presented to Sir John Sheehy, C.S.I., I.C.S., Member, Central Board of Revenue, the Indian Merchants' Chamber, Bombay, reiterates its view that the existing taxation policy does not leave with industry adequate reserves for rehabilitation and expansion from out of their profits and that they are not being helped to build up the financial strength that should sustain them in periods of adversity. But in his latest budget speech Sir Jeremy Raisman claimed that the policy of taxation was so framed as not to deplete the reserves of industry. What are the facts, however? Industry now pays 66⅔ per cent. by way of E.P. tax, in addition to the increase of 120 per cent. in income and corporation taxes which have been raised from 42 pies to 93 pies.

Depreciation allowances are not based on replacement value. This is necessary since replacement costs have risen several times over the original costs. Government's announced policy has been to adjust the tax system in such a way as *not* to act adversely on the development of industries in India only after provision has been made to meet the ends of social justice and the needs of the official budget. The Chamber objects to this, and regrets that the Government should, in spite of their professed eagerness to make available to industry the initial additional depreciation allowances that the British Government have offered to industry in England, should have given the go-by to the initial depreciation allowances of 20 per cent. for machinery and 10 per cent. for buildings which had been foreshadowed in their latest budget.

Upper India Chamber of Commerce, Cawnpore

Location of Industries.—Asked for its views on the constitution of an industrial licensing board to advise Government on the location of industries and for granting licences for the erection of new factories, the Chamber is emphatically of the opinion that industrial location is a matter very largely of a number of economic factors and that, even granting the desirability of having some sort of co-ordinated development, it was necessary that the matter should be proceeded with by the Central Government rather than by the Provincial Government.

Madras Provincial Handloom Weavers' Association, Nidubrolu

At a recent meeting of the Working Committee of the Association, protests were made against "the arbitrary and undemocratic" selections made for the representatives of Madras Province on the All-India Handloom Board.

In another resolution the Association urges more equitable and liberal supplies of yarn. It alleges that the Fact-Finding Committee's estimates of the number of looms in the different districts are an underestimate. Their complaint is that the quotas allotted to the different districts are inadequate and further that even these quotas are not always forthcoming in time. And then they continue:

The All-India Yarn Distribution Scheme has also contributed to the weavers' misery by insisting upon the export of at least 33⅓ per cent. of Madras provincial mill-yarn production.

Even millowners seem to be contributing their share to the misery of handloom weavers by supplying to local weavers yarns unsuited for local varieties of cloth, and reserving higher counts of yarn for export so that they can take advantage of better profits prevailing in other Provinces.

Therefore the Association request the Government to see that (1) all yarn produced in Madras mills is reserved for local consumption; (2) that the local yarn consumed by weaving mills should be reduced or rationed in the same proportion in which it is rationed to weavers; (3) that the good offices of the A.I.S.A. shall be utilized in getting more and more handspun yarn produced by granting subsidies for that purpose.

Regarding the proposed control of handloom cloth prices, Mr. Pragada Kotayya urges the All-India Handloom Board not to interfere with the industry. Unless, he says, adequate supplies of yarn, dyes and chemicals, etc., at reasonable prices are effectively secured, the price of handloom cloth cannot be expected to come down, as the present level of price of handloom cloth is based on the black-market prices paid by the weaver for his raw materials, namely, yarn, dyes, and chemicals, etc.

In connection with the proposed control of handloom cloth, the memorandum points out that handloom cloth in its nature does not permit of price fixation in the same way as mill cloth. Texmarking of handloom fabrics may be desirable, but in view of the scattered nature of the industry, it would be short-sighted to expect every single weaver from the remotest corners of the country to run up to the control office every time for getting his product texmarked. Handloom weavers being mostly illiterate there is a special need for giving the widest publicity to all control measures affecting them.

Andhra Chamber of Commerce, Ltd., Madras

12th Annual Meeting.—The following are extracts from the presidential address of Mr. C. Seshachalam, M.A., B.L., at the 12th annual general meeting of the Chamber:—

"In spite of assurances given by the Government, it is most regrettable to note the policy recently followed by the Government in respect of imports which has given much room for suspicion and distrust. The Hydari Mission was sent to the United Kingdom with the avowed intention of making good by imports any deficiency in articles of common use and other essential requirements of war now supplied by Indian industries. The public are not yet aware of what exactly transpired behind the scenes. The actual result has, however, been the close-down in recent months of some of our recently started industries. We do not know what the fate of other industries of a similar type will be. No wonder, it has been emphasized by all sections of public opinion that if the questions of reconstruction are to be successfully tackled, the Government of the country must be fully representative, drawing its strength from the faith and the confidence of the people. The import policy should be one designed to nurse new industries and to protect important basic industries at least till such time as they are able to face open competition. It is desirable that Government should actively associate commercial opinion and set up an Advisory Council consisting of authorized representatives of commercial interests to advise them in all matters of imports, particularly as it is learnt that Government intend to continue the import controls for some years more.

"Though import control may act to some extent as a protective barrier to Indian industries, the real progress depends on the measure of protection to be guaranteed by Government for a definite period. Time and again, it has been emphasized that protection against foreign competition would be given to industries started during the war-time either directly to meet war-time demands or as a result of the conditions created by war. Government have no doubt recognized the need for a policy of sound protection in the post-war period and have duly stressed the urgency of the establishment of a permanent Tariff Board. But no steps have yet been taken in that direction. The Commerce Department have recently called on the industries started during war period to make out their case for post-war protection. Such piecemeal measures and investigations would hardly touch the fringe of the problem. It is only a permanent Tariff Board fully representative of the commercial community that would be competent to lay down an effective policy of protection to ensure the growth of our industries.

"I may be permitted to deal with another aspect of Government policy which has been seriously impeding the progress of our industries. The present taxation policy of Government calls for a radical revision. Industries are now bearing a crushing burden and this must be lightened as quickly as possible. The excess profits tax should be repealed to enable business interests to improve and repair equipment and encourage further investment generally.

"It is obvious that the demands of war have placed an unusually great strain on all existing industries. Much of the machinery is completely worn out and needs replacement forthwith. The import of machinery and capital goods in large quantities is essential at least to meet immediate requirements. Great Britain is not in a position to meet this demand and may not be able to do so for quite some time. It is, therefore, the duty of our Government to secure ways and means of acquiring necessary foreign exchange for the purpose of purchase of capital goods outside the United Kingdom.

"Whatever might be the pace at which our country is going to be industrialized, the Government of India should revise their policy of the existing war-time controls on industry and commerce. At any rate, there is no necessity for their continuance as the times of emergency for which they were designed are certainly changing for the better. The working of these controls in the country has bred bribery and corruption, interrupted the smooth and normal running of trade channels and intensified the suffering of the people. I am of the considered opinion that all the existing war-time controls should be annulled, thus allowing normal trade to function smoothly.

"In respect of export controls, I wish to emphasize the immediate need for a free hand to Indian exporters to expand their trade. We have acquired new markets in the Middle East and the Eastern countries during the war period and the need for stabilizing and improving these assets cannot be stressed too much. Very soon all other industrial countries would be trying to capture every available market to dump their products and we should ensure a proper share for our own products. The appointment of Trade Commissioners in all countries is necessary to safeguard our interests and to popularize the products of Indian industries."

Indian Chamber of Commerce, Calcutta

Quarterly General Meeting.—The first quarterly general meeting of the Chamber was held recently at Calcutta. Sir Abdul Halim Ghuznavi, Kt., M.L.A. (Central), the President of the Chamber, criticized the industrial policy of the Government of India "as it did not deal with the question of protection and assistance to the Indian industries started before and during the war against foreign competition. What was most urgently required was the enactment of a measure by which Government could immediately impose protective duties or give any other assistance to an industry which was threatened with loss or was closing down on account of revival of foreign competition. The Government of India should also give a definite assurance that they would not permit foreign vested interests to establish themselves and strengthen their hold on Indian economic development under the shelter of any protective tariff. The Government should also formulate a policy that would offer sufficient incentive and security to private enterprise to take the risks incidental to industrial pioneering. State intervention should be confined merely to prevention and elimination of avoidable waste in the future structure of Indian industries. It was also essential that the taxation policy in India should be radically revised so that the Indian industries might be in a position to strengthen their resources. Government must assist Indian industry to step up its production and import capital goods from foreign countries. It was, however, necessary that the import of consumer goods should be regulated.

Revise Taxation

"To secure full and free co-operation of private enterprise in promoting the industrial development of this country, the Government of India will have to radically revise its policy of taxation. To-day, the incidence of taxation is so heavy that it leaves a very meagre margin indeed for proper replacements and renewals. In this connection, we may note the statement made by the British Chancellor of the Exchequer who said that profits that are taxed should be real profits in the sense that those profits should be struck only after making all proper deductions and allowances such as might be made on a commercial basis for the amortisation of money expended on assets which are used up in earning profits. If the Government of India had adopted this principle while formulating their policy of taxation, the incidence would have been lighter than what it is, and helped thereby to build up adequate depreciation and reserve funds. I may, therefore, request the Government of India to modify their policy of taxation immediately so as to enable Indian industry to make adequate provision for depreciation, replacement and development. Further, Government should also discriminate between distributable and non-distributable earnings and the capital thus ploughed back in business should be granted substantial relief from taxation so as to enable the industry to carry out its schemes of rehabilitation and reconstruction."

I.L.O. To Set Up World Industrial Committees

THE Governing Body of the International Labour Organization have decided to set up, within the framework of the Organization, International Industrial Committees with a view to providing specialized machinery to consider the problems of certain of the major world industries.

The Committees will be tripartite, comprising representatives of Governments as well as of employers and workers, subject to the right of each committee to appoint bipartite sub-committees or to arrange for parts of its meetings to be bipartite. The responsibility for appointing the employers' and workers' members of the Committees has been left to Governments who will make the appointments in agreement with the principal organization of employers and workers having a substantial membership in the industry concerned. Each Committee will include a delegation of the Governing Body comprising equal number of representatives of the Government group, the employers' group and the workers' group.

The Committees will be set up in the first place in several industries including textiles (sub-committees may ultimately be set up for various branches of the industry).

India has been invited to participate in all these Committees except the one on Petroleum Production and Refining. All the Committees on which India has been invited to be represented are world-wide in scope.

The International Labour Office have now asked the Government of India to obtain the views of the employers' and workers' organizations concerned on the question of the number of representatives of each group and send it to them so as to reach them not later than 15th July 1945. The Office has invited attention to the fact that some limitation of the number of employers' and workers' representatives, whose expenses will be paid by the International Labour Office, will be necessary.

Law Reports

No Retrial for Same Offence: High Court Ruling in Case of Acquittal

AN important decision under Section 403 of the Criminal Procedure Code, that a person once acquitted of an offence cannot, be tried again for the same offence was given by Mr. Justice Weston and Mr. Justice Bavdekar at the Bombay High Court in a revision application filed by Narandas Manmohandas Ramjee and two others being a managing agent, manager and a weaving master of the Indian Manufacturing Co., Ltd., against Mahomedalli.

In January 1942, it was agreed between the mills and the workers following conciliation proceedings under the Bombay Industrial Disputes Act, 1938, that there would be a change-over of workers from the night-shift to day-shift and *vice versa*. This change-over was to take place every month. Thereafter a number of day-shift workers protested that by reason of their defective eyesight they would have difficulty in doing night-shift. The management then decided not to send certain workers who had defective eyesight to the night-shift and to keep some of the night-shift workers to work in the night-shift. These night-shift workers refused to work and complained that the management had violated the terms of the agreement and had, therefore, made an illegal change within the definition of s. 73 of the Bombay Industrial Disputes Act. An application was, thereafter, made to the Industrial Court which held that the management had made an illegal change.

Applicants Acquitted

Following this decision one night worker, by name Abdul Sattar, filed a complaint charging the applicants under s. 69 of the Industrial Disputes Act for having made an illegal change. After some hearing of the case, the complainant remained absent and the magistrate acquitted the applicants holding that the evidence led till then was not sufficient to warrant a conviction. Thereafter another night worker filed a second complaint on the same facts for the same offence. The applicants submitted that the court had no jurisdiction to try this complaint under s. 403 of the Criminal Procedure Code. The magistrate held that each aggrieved operative had a right to make a separate complaint. Mr. Justice Weston in giving judgment said that the order of acquittal clearly fell under s. 247 of the Criminal Procedure Code and there was authority of this High Court (I.L.R. 53 Bom. 693) that s. 403 barred a fresh trial of the accused for the same offence when acquitted under s. 247.

The question, therefore, was whether a trial on the second complaint would be a trial for the same offence as that of the first complainant.

The magistrate seemed to think that the applicants must be deemed to have made not one illegal change but 36 illegal changes as there were 36 workers affected.

"Illegal Change"

In their Lordships' opinion, if a plurality of persons were affected by an offence it did not necessarily mean that many offences had been committed. The Industrial Court's order was that there was an illegal change and not that there were 36 illegal changes. Several persons might be affected by an illegal change and it was desirable that persons so affected should be able to secure the punishment of the employer but what the section contemplated was one prosecution and not perhaps several hundreds of prosecutions because several hundreds of workers might be affected.

In the present case both the complaints were for the same offence and as the applicants had been acquitted once they could not be tried over again for the same offence.

Industrial Tribunal and High Court: No Power to Issue "Certiorari" Writ

Holding that the Bombay High Court had no jurisdiction to issue a *writ of certiorari* against the Industrial Court as the parties sought to be affected by it were in Ahmedabad which was outside the limits of the Presidency-town of Bombay, His Lordship Mr. Justice Bhagwati at the Bombay High Court dismissed a petition brought by the Ahmedabad Cotton Manufacturing Co., Ltd., on behalf of itself and other local member mills of the Ahmedabad Millowners' Association against the Textile Labour Association, Ahmedabad.

In January 1945, the Labour Association gave a notice under s. 28(2) of the Bombay Industrial Disputes Act of 1938 demanding a bonus equivalent to four months' wages of the employees of the mills at Ahmedabad.

As no agreement was arrived at between the parties concerned and as the Chief Conciliator also failed to bring about a settlement, the Government of Bombay referred the dispute to the Industrial Court on the basis that the demand of bonus was an industrial dispute. The petitioners contended that bonus was not such that the opponents could claim it as a matter of right: it was to be allowed out of free will and so the claim to bonus was not an industrial dispute which could be referred to the Industrial Court. The petitioners, therefore, applied to the High Court for a *writ of certiorari* calling upon the Industrial Court to send its records to the High Court for the purpose of quashing the proceedings before it.

On a preliminary objection that the High Court had no jurisdiction to issue the writ, His Lordship dismissed the petition relying upon the decision of the Privy Council in *Ryots of Garabandhs* v. *The Zemindar of Parlakimedi* (70 I.A.A. 129).

OUR PERSONAL COLUMN

The British Premier, **Mr. Winston Churchill,** has resigned, owing to the heavy defeat in the latest Parliamentary elections and **Mr. Clement Attlee,** leader of the Labour Party, has formed a new Government on the invitation of His Majesty. **Mr. F. W. Pethick-Lawrence** has been made a Peer and appointed Secretary of State for India in the new Government.

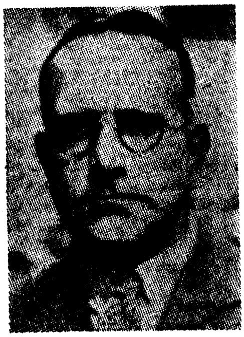
Sir Frank Platt, Cotton Controller, England, has resigned. He is succeeded by **Mr. R. W. Lacey,** his Chief Assistant.

Sir Frank Platt

Sir Frank was Deputy Controller from 1939 until he succeeded Sir Percy Ashley as Controller in 1941. His work in connection with the reconstruction of the Lancashire Cotton Corporation, of which he was Managing Director previous to becoming Cotton Controller, is well known.

Last year Sir Frank headed a Cotton Mission to the United States and the report presented by the Mission made striking comparisons between British and American methods. More recently he has visited Egypt, France and Belgium.

Sir Frank Platt has since been appointed Vice-Chairman and Managing Director of the Lancashire Cotton Corporation. **Mr. Littlewood,** who has been acting as Managing Director, has relinquished that position voluntarily, but will remain a member of the Board.



Mr. Littlewood

Mr. Lacey, who is in his early forties, has been chief assistant to Sir Frank throughout his official appointment and Secretary to the previous Controller.

During the 1914-18 war he served in the R.A.F. He took the Mathematical Tripos in 1922, and the same year started in the cotton spinning trade. Mr. Lacey joined the staff of the Joint Committee of Cotton Trade Organizations in 1927, becoming Secretary in 1932. He went to India in 1933 as Statistical Adviser and Assistant Secretary to the Clare Lees Textile Mission, and in 1935 was Secretary to a similar mission to Canada. The following year until the outbreak of war he was largely concerned with the promotion and passage of the Cotton Trade Reorganization Act of 1939.

The Lancashire Cotton Corporation has appointed **Mr. James Buckley,** of Oldham, as Chief Officer of its technical department. Mr. Buckley, who will begin his new duties forthwith, has been for many years Mill Planning Engineer for the textile machinery merger at Platt Bros., Ltd., and is well known as a result of his lectures on textile machinery and of his recently published book "Modern Cotton Spinning and Doubling."

The first occupant of the Chair of Electrical Engineering at Cambridge University established under the auspices of the Institution of Electrical Engineers is to be **Dr. E. B. Moullin.** He is at present Donald Pollock Reader in Engineering Science at Oxford. Dr. Moullin, who was born in Dorset in 1893, holds the M.A. degree of both Cambridge, where he was a University lecturer from 1920 to 1929, and Oxford, where he has been a Fellow of Magdalen College for some years.

Mr. John Boulton, who has been awarded the Dyers' Company Research Medal, was born in Manchester and went to school there. At sixteen he went as full-time day student to the Manchester College of Technology and after two years took the Senior Technical Certificate in Chemistry and joined the University

Higher Course in the Faculty of Technology, reading for the degree of B.Sc. Tech. He took this with first class honours and received the graduation prize from the Department of Textile Chemistry. He was awarded a post-graduate scholarship and chose to do research in the Cellulose Chemistry Department set up in the college in the same year. He worked on the absorption of direct dyes by cellulose.

Mr. Boulton joined the Textile Research Laboratories of Courtaulds, Ltd., straight from College and continued to carry out researches into the nature of dyeing.

He is married and has two sons. Outside work, his principal interest is music—listening to it, playing it, writing about it or talking about it.

Two members of Courtaulds research staff have now received this award. The other was Dr. T. H. Morton.

Mr. H. N. Sporborg is retiring at the end of June from the position of Chairman of the Board of Directors of the British Thomson-Houston Co., Ltd., after completing forty-three years' service with the company.

Mr. Sporborg is also retiring from the positions of Vice-Chairman of Associated Electrical Industries, Ltd., Chairman of the Cosmos Manufacturing Co., Ltd., Chairman of Lamp Caps, Ltd., Director of the Metropolitan-Vickers Electrical Co., Ltd., and Director of the Switchgear Testing Co., Ltd.

Air Chief Marshal Sir Wilfrid R. Freeman, G.C.B., D.S.O., M.C., has been appointed a Director of Courtaulds, Ltd.

Mr. Charles E. Opitz, Cotton Authority and Managing Editor of *The Cotton Trade Journal*, Memphis, U.S.A., is going to Europe to join the Office of War Information.

Cotton and Rayon Merchants' Council.—The new Council of the Cotton and Rayon Merchants' Association, Manchester, elected recently, consists of: Messrs. E. A. Carpenter, H. E. Pardoe, H. P. Bardsley, J. Fishwick, L. F. Behrens, R. B. Barclay. H. Kenyon, C. G. Hargreaves, H. S. Wood, A. V. Symons, T. G. Hill, G. C. Mackenzie, junr., C. E. Coates, H. Foster, F. J. V. Fernie, H. Plaskett, A. Dyckoff, and E. Thornber.

In the latest birthday honours list is the C.B.E. conferred on **Mr. L. E. Mather,** Chairman of Mather and Platt Ltd. and Regional Controller to the Ministry of Production, England.

Sir A. Ramaswami Mudaliar, leader of the Indian delegation to the San Francisco Conference, and Member for Supply, Government of India, arrived in Karachi from London on Monday the 30th July, 1945.

Sir Ardeshir Dalal, Member for Planning and Development, Government of India, arrived in Karachi from London on Tuesday, the 7th August. He was accompanied by Mr. H. V. R. Iengar, I.C.S.

Sir Homi Mehta, K.B.E., Chairman of the Bombay War Gifts Fund, who had been deputed by the Commander-in-Chief of India to inquire into and report on the welfare arrangements for Indian troops in Iraq, Iran, Palestine and Italian theatres of war, has returned.

Nawab Mushtaq Ahmed Gurmani has been appointed Director-General of Resettlement and Employment in the Department of Labour for a period of five years.

The Director-General will be the head of the resettlement and employment organization. He will supervise, co-ordinate and direct the work of both the central and regional sections of the organization and will maintain close contact with the departments of the Central Government and with the provincial and Indian States' Governments with a view to bringing about co-ordination of measures connected with resettlement and employment.

Mr. B. N. Adarkar has been appointed Deputy Economic Adviser to the Government of India. Prior to this appointment Mr. Adarkar was Under Secretary to the Government of India in the Department of Commerce and Secretary, Post-war Reconstruction Committees.

Mr. R. U. Patel, Assistant Stores Purchasing Officer and officiating Deputy Director of Industries, has been appointed to act as Secretary of the Textile Research Co-ordination Committee, set up by the Government of Bombay, until the new Deputy Director of Industries takes charge of his post.

Mr. R. S. Mani, who had been Export Trade Controller, Bombay, for the past four years, has left for the United Kingdom to take up his new duties as Political Secretary to the High Commissioner for India. Mr. Mani was formerly Deputy Secretary to the Government of Bombay, General and Education Department.

Mr. S. N. Mehta, Deputy Chief Controller of Imports, Bombay, has been appointed Controller of Exports, in addition to his own duties.

The Central Provinces Government has appointed **Mr. K. N. Nagarkatti,** I.C.S., now Registrar of Co-operative Societies, on special duty, to examine in greater detail the report of the Provincial Industrial Committee, presided over by Mr. P. S. Rao, Commissioner, and make specific recommendations to the Government.

The Committee of the Indian Merchants' Chamber have appointed **the Hon'ble Sir Rahimtoola M. Chinoy** as their representative on the Advisory Board of the Sydenham College of Commerce and Economics for a fresh term of three years.

Upper India Chamber of Commerce, Cawnpore.—The following sub-committees of the Upper India Chamber of Commerce, Cawnpore, have been elected for the current year:—

Cotton Sub-Committee.—The President (The British India Corporation, Ltd.); Mr. A. H. Buckland (Messrs. Atherton West & Co., Ltd.); Mr. J. N. Cocolas (Messrs. J. N. Cocolas & Co.); Mr. A. Grezo (Messrs. Patel Cotton Co., Ltd.); Mr. J. M. Heeramaneck (Messrs. Volkart Bros. Agency); Mr. E. J. W. Plummer (The Swadeshi Cotton Mills Co., Ltd.); Major S. R. Pocock, M.B.E., M.C., M.L.A. (Cawnpore); Mr. K. J. D. Price (Cawnpore); Mr. Ranjit Singh, M.B.E. (The R. G. Cotton Mills Co., Ltd. Lucknow); Mr. J. K. Srivastava (The New Victoria Mills Co., Ltd.); Mr. J. Tinker (Cawnpore); and Mr. H. A. Wilkinson, M.L.C. (The Elgin Mills Co., Ltd., Cawnpore).

Wool Sub-Committee.—Mr. W. R. Watt, C.B.E. (Convener), Cawnpore; Mr. L. V. Craig (The Cawnpore Woollen Mills) and Sir Hargovind Misra, O.B.E. (Messrs. H. G. Misra & Co.).

Mr. N. G. Devadhar, L.T.M., Bhide Colony, Railway Lines, Sholapur (Superintendent, Lakshmi-Vishnu Mills Technical School, Sholapur), has been elected a member of the Textile Institute, Manchester.

Mr. Henry Von Kohorn, Rayon Expert.—Mr. Henry Von Kohorn, Vice-President of Oscar Kohorn & Co., Ltd., of New York, U.S.A., has arrived in Bombay to conduct necessary local surveys in connection with the establishment of several rayon yarn plants in India.

Oscar Kohorn & Co., Ltd.,* are manufacturers of rayon machinery and consulting engineers with 30 years' experience in the designing, installation and operation of complete rayon and staple fibre plants. They have erected over 40 complete plants in North and South America, Europe and Japan, furnishing their own expert chemists, engineers and their patented processes for the manufacture of rayon yarn.

Mr. Von Kohorn, who is a chemical engineer, is visiting India at the request of several textile groups in this country. He states that prior to the war, "Japanese rayon was imported into India so cheaply that it would have been difficult to operate a rayon plant in India economically. However, the course of the war and industrial developments in India now make the establishment of rayon plants a sound economic proposition and a national necessity. There is no reason why India should not produce

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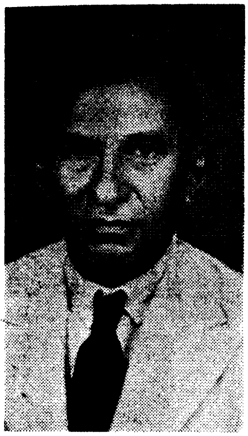
*Indian Agents: **Duncan Stratton & Co., Ltd., 5, Bank Street, Fort, Bombay.**

rayon yarn as cheaply as Japan ever did, and at the same time turn out a far superior product."

"We are prepared," Mr. Von Kohorn stated, "to commence immediately with machinery deliveries and to complete the construction of these plants within twelve months."



Mr. Phirozshaw Hormusjee Daroowalla started in 1907 as an ordinary mechanic in the Kurla Swadeshi Mills Ltd. and, getting practical experience, passed the Boiler Act examination. In 1915 he became Assistant Engineer in the Ryan Sugar Factory in Darbhanga District managed by Messrs. Begg Sutherland & Co., of Cawnpore. From 1920 he worked as an electrician in the Manockjee Petit Mills, Bombay, and was also superintending the sister mills—the Bomonji, Dinshaw and Framji Petit mills—until the mills went into liquidation.

Mr. Daroowalla subsequently opened an automobile workshop on Lamington Road, Bombay, with modern equipment for spray painting and repairing, but had to close it down due to severe competition. In October 1934 he joined the Shree Nivas Cotton Mills, Bombay, as Electrical Engineer, and erected the new cheese and beam dyeing and bleaching departments, where the machinery is being driven by individual motors, for which a new L.T. sub-station was built departmentally. Several other departments also were improved by the introduction of the individual motor. From 1940 onwards Mr. Daroowalla was appointed by the management as Chief Engineer, he having to look after the mechanical side as well. He has been in charge of the whole of the electrical installation in the mills, and the management entrusted him with the work of replacing the old electric lighting installation with new modern type ones. Several departments have already been completed and we are informed that they are well spoken of by insurance and Government authorities.

Mr. Manubhai D. Vaidya, Textile Assistant, R.C. Technical Institute, Ahmedabad, is now retiring after 25 years' useful service. Many are the students who have been trained by him and are now prosperously settled in life.

Mr. Vaidya was educated at Bhavnagar and at the V.J.T. Institute, Bombay. He joined the laboratory of Berlin Aniline Co. to study the theory and practice of dyeing. In 1910 he joined the Calico Mills, Ahmedabad, as a sizing assistant and made himself thoroughly familiar with the working of the department. Subsequently he served in the Barsi Mills, and in the Madhubhai Mills and Commercial Mills of Ahmedabad.

Mr. Vaidya has been a frequent contributor, under the penname of "KAPAD KALA," to the *Gujarat Samachar, Sandesh* and *Gujarat Panch* and has also published a very popular book called "Sizers' Pocket Book."

Mr. Vaidya is the honorary secretary of the Dhanlaxmi Co-operative Housing Society, Maninagar, and the Maninagar Co-operative Consumers' Stores, where he has to look after their general management and working.

Mr. Vaidya is a member of the War Broadcast and Publicity Committee and the National War Fund at Ahmedabad. He is an authorized agent of National Small Savings at Maninagar, appointed by the War Committee and authorized by the City Deputy Collector, Ahmedabad. He was an A.R.P. warden as well. At present, he is a member of the Ward Rationing Committee, Kankaria Ward, Ahmedabad.

Trading In Futures Contracts Allowed

Floor and Ceiling Prices

AT a meeting of the Cotton Committee (D) of the Textile Control Board held in Bombay on 4th August, the Government of India announced, that they had given very close consideration to the various recommendations made by that Committee at its earlier meetings and, subject to the consent of the Governments of Bombay and Sind being obtained by, respectively, the East India Cotton Association, Limited, and the Karachi Cotton Association, Limited, they sanctioned trading in futures (hedge) contracts during the season 1945-46 on the terms and conditions set out below:

Trading shall be permitted only in the official markets of the East India Cotton Association, Limited, in Bombay and the Karachi Cotton Association, Limited, in Karachi, subject to the by-laws of these Associations. Such trading in any other market shall be a penal offence.

Trading in options shall continue to be prohibited and shall remain a penal offence.

Trading shall be subject to a maximum price of Rs. 530 and a minimum price of Rs. 350 per candy for the Indian Cotton Contract in Bombay and Rs. 55-8 per maund and Rs. 37 per maund for the 4F (hedge) Contract in Karachi, maximum and minimum prices for other descriptions being as set out below. These maximum and minimum prices shall apply to all cotton transactions, including prices fixed in the case of "on call" contracts.

Members' Deposits

Every member of the Associations concerned shall deposit with the Associations which shall in return deposit with the Imperial Bank of India, a sum (not carrying interest) which shall not be less than Rs. 12½ per bale on the net open position of each member regardless of price levels.

The Associations concerned shall enforce rigidly their various by-laws and, in the event of failure to do so, the Government reserve the right to take such action as may be considered appropriate.

The Associations shall retain their power to call upon any member at any time to submit a statement showing his open position and the accounts on which it is held and such statements shall, if called for, be made available to the Government. If the Associations are unwilling to exercise such powers when necessary, the Government will themselves exercise them.

The following are the floor and ceiling prices fixed for the 1945-46 season:

Description	Staple length	Floor price 1945-46 Rs.	Ceiling price 1945-46 Rs.
Fine Jarilla	¾″	350	530
Fine Broach	¾″	350	530
Fine Surti	⅞″	445	645
Fine RG 4F P/A	¾″	370	550
Fine RG LSS P/A	13/16″	400	590
Fine RG 289F P/A	⅞″	460	660
Fine SG 4F P/A	¾″	390	580
Fine SG LSS P/A	13/16″	425	625
Fine SG 289F P/A	⅞″	500	715
Fine RG 4F S/A	¾″	370	550
Fine RG LSS S/A	13/16″	400	590
Fine RG N.T. S/A	⅞″	420	645
Fine SG 4F S/A	¾″	390	580
Fine SG LSS S/A	13/16″	425	625
Fine SG N.T. S/A	⅞″	455	690
Fine Dhollera	¾″	..	500
Fine Kalagin	¾″	..	500
Fullygood Bengal Deshi	..	..	300
Fine Oomra Deshi	..	..	375
Fine Sind Deshi	..	..	375
Fine M.G. Compta	⅞″	430	630
Fine M.G. Upland	13/16″	390	580
Fine M.G. Western	13/16″	370	580
Fine M.G. Cambodia	⅞″	450	650
Fine M.G. Karunganni	13/16″	390	580

These prices are ex-godown Bombay, ¼ per cent. brokerage payable by the seller to the buyer and include the usual sample and stone allowances. In the case of American seed descriptions, Karachi equivalents of the floor prices are to be calculated as Rs. 18 per candy less than the Bombay minimum prices, i.e., Fine R.G.4F Punjab/American or Sind/American 3/4″ floor price Rs. 370 less Rs. 18 equal to Rs. 352 per candy equal to Rs. 37 per maund. Karachi equivalents of ceiling prices are to be calculated by deducting Rs. 21 per candy from the Bombay ceiling prices, i.e., Fine R.G.4F Punjab/American or Sind/American 3/4" ceiling price Rs. 550 less Rs. 21 equal to Rs. 529 per candy equal to Rs. 55-8 per maund.

Government's Undertaking

When prices are at the minimum rates for any or all of the descriptions for which such rates have been fixed, the Government of India undertake to buy such cotton of grade and staple specified for those minimum rates in Bombay on terms set out above and at equivalent prices elsewhere. The Government reserve to themselves the option of buying higher grades or longer staples at premia to be determined by them, but the premia for the various descriptions need not necessarily be the "on" allowances awarded by the East India Cotton Association and the Karachi Cotton Association for cotton tendered against the hedge contracts of those Associations.

At the maximum rates listed, the Government reserve the right to requisition cotton of the descriptions listed, grade and staple as named, whether for the use of mills or otherwise. In the event of higher grade or longer staple cotton being requisitioned, a premium will be paid for such cotton by the premia for the higher descriptions which need not necessarily be the "on" allowances awarded by the East India Cotton Association and the Karachi Cotton Association for cotton tendered against the hedge contracts of those Associations.

Staple standards shall be prepared by the East India Cotton Association in accordance with the procedure laid down in the resolution of the Board of the East India Cotton Association and the Textile Commissioner shall have the right of appeal against such standards.

In permitting the continuance of futures (hedge) trading in cotton, the Government again emphasize that this action is designed to meet the special circumstances of the cotton market but it should be understood that safeguards will be rigorously enforced in the interests of price stability.

Bombay Cloth Rationing at Work

MOST residents of Bombay City and the Bombay Suburban District have now registered their cards for the purchase of cloth and very few new applications are now being received for registration. The authorities have, therefore, decided not to keep Rationing Inspectors at each shop as from 29th July. The Inspectors will instead sit in a central shop and will arrange the registration for a group of three or four cloth shops in the vicinity.

The cloth shopkeepers concerned will give a slip bearing the number of the central shop where the inspectors will be sitting and direct intending applicants to that shop. The applicants should go to that central shop and produce before the inspector at that shop their applications duly endorsed by their grains ration distributor, and their foodgrains ration cards or certificates of eligibility.

It is possible, however, that there are still some permanent residents of Bombay City and the Bombay Suburban District who have not yet registered their foodgrains ration cards for the purchase of cloth. Such people should make the necessary applications before 1st September 1945. Otherwise, they will be treated as new arrivals and will have to wait after that date (September), for three months before their applications can be registered.

The procedure regarding the acceptance of applications received on or after 1st September will be announced in due course.

The Bombay Cloth Rationing Order, 1945, is being suitably amended, says a press note issued by the Supply Commissioner, Bombay.

Finer Varieties of Cloth : Scarcity Explained

A common complaint is made about cloth rationing—that cloth of a particular mill or design that one wants is not always available and that, in general, finer varieties are scarce.

It is pointed out in this connection that the Government of Bombay receive an allotment of cloth from the Central Government in common with other Provinces and States. Each allotment does not contain cloth of a particular mill or design in sufficient quantities to be distributed at one and the same time to all the shops; if this were to be done, each shop would get only about one or two yards of that particular cloth. Such cloth is, therefore, given to groups of shops in rotation. But, at the same time, it is seen that similar cloth of equal fineness but manufactured by other mills is given to the other shops.

Finer Varieties

As regards the scarcity of finer varieties, it is pointed out that in pre-rationing days there were complaints that these varieties were available only in the black market. This was because of their shortage. The proportion of superfine and fine varieties to the total production of cloth is only 6 per cent. and 11 per cent. It is clear, therefore, that only 17 per cent. can get these varieties, the rest having to be satisfied with medium and coarse cloth.

Rationing, it is pointed out, does not guarantee that everybody will get the type of cloth he desires, but it guarantees that everyone will get his quota of the rationed varieties at fixed prices. Thus while all cannot get fine cloth, those who do get it get it at the fixed prices without trouble and against their ration documents.

The authorities have taken necessary measures to see that the dealers do not take advantage of the scarcity and indulge in any favouritism. They are required, in the first place, to maintain samples of all the varieties in stock, secondly, to keep all the stocks open to the view of the customers and, thirdly, not to refuse to show or sell any variety they have in stock. The public should bring to the notice of the authorities any breach of these instructions so that necessary action can be taken.

Cloth Registration Sheet: Provision for Changes

There is provision in the cloth registration sheet for authorized changes in the composition of a family. Such changes occur when new members arrive in the family for permanent stay or when a child's one-unit foodgrains ration card is changed into a two-unit card on completing six years. For getting the number of persons correspondingly altered in the cloth registration sheet, form C-6 is to be used.

The counterfoil of the cloth registration sheet, the foodgrains ration card of the head of the household and of the person in whose respect the change is to be made should be produced along with the C-6 form duly filled in, at the rationing office of the ward in which the cloth shop of the family is situated. The ration cards will be returned after the necessary scrutiny and a date given to the applicant on which the counterfoil of the registration sheet with the changes made will be returned to him.

On and after 1st September, however, applications on form C-6 will not be accepted on presentation but after three months from the date on which a foodgrains ration card is issued to a new arrival or a one-unit card changed into a two-unit card.

A Press note issued by the Supply Commissioner, Bombay, says that if any registration counterfoil issued in connection with cloth rationing in Bombay City and the Bombay Suburban District is lost, defaced or destroyed, a fresh one will be issued only on application by the holder of the ration document and on payment of a fee of 2 annas. A registration sheet may be lost, defaced or destroyed by a rationed cloth distributor.

The application for replacement in both cases should be made to the rationing officer of the area in which the shop where the registration sheet is registered is situated.

Sir Akbar Hydari in Calcutta

Sir Akbar Hydari, Secretary, Industries and Civil Supplies Department, Government of India, announced at a Press Conference in Calcutta on 2nd August, that an agreement had been reached in Calcutta to set up an association representing all communities and interests for the procurement of cloth both from outside the province and inside and for its internal distribution, after discussions with representatives of the Government of Bengal and the various interests connected with the procurement and distribution of cloth and the consumers.

Sir Akbar explained that the scheme was now before the Bengal Government for formal acceptance. The association would have a governing body consisting of leading men of all communities and an executive committee consisting of representatives of trade interests and nominees of the Bengal Government; it would work under the "general umbrella" of Government and he hoped that with the co-operation of all interests concerned it might be possible to utlilize normal channels of trade. He gave an assurance that the Central Government would give any assistance in case of difficulties.

The association will work through a governing body of eight members. The membership of the association is to be restricted to *bona fide* wholesale dealers in piecegoods in Calcutta.

The Governing Body will be composed of Sir Badridas Goenka, Sir Adamji Haji Dawood, Sir Abdullah Ghaznavi, Mr. B. M. Birla, Mr. R. L. Nopani, Mr. M. A. Ispahani, Dr. N. N. Law and Mr. J. K. Mitter. The Executive Committee, of which the members of the Governing Body will be ex-officio members, will be constituted with 17 others, including two nominees each of the Bengal Chamber of Commerce, the Muslim Chamber of Commerce and the Bengal National Chamber of Commerce, eight elected members of the association and three nominees of the Government.

The association will exist until the repeal of the Cotton Cloth and Yarn Control Order or unless it is terminated by the Bengal Government.

Recalling the steps taken to increase the supply of cloth for civil consumption, Sir Akbar pointed out that as a result of the Hydari Mission to the U.K., it had been decided that defence requirements in 1946 would be reduced from 600 million yards to 400 millions and exports out of India would be reduced to 200 million yards. Furthermore, Indian production of cloth would be raised by another 200 million yards through increased facilities for the supply of mill stores and other requirements. The coal ration for the textile industry had also been increased by 10,000 tons a month.

CONTROL NOTES AND NEWS

Leather Beltings

Profit margins for some more articles such as full rolls and cut lengths of leather belting, hair belting, cotton belting, V-ropes, V-belts and all types of belt fasteners and belt laces, for sale by importers to wholesale dealers or agents, by importer to retail dealers and in cases not specifically provided for, have now been fixed.

Blanket Freezing Order

By a notification published in the *Gazette of India Extraordinary*, dated 18th July 1945, the Blanket Freezing Order of 16th December 1944, which was re-issued on 11th June, 1945, has now been amended bringing within the purview of the order commission agents and other dealers who, acting on behalf of quota-holders, take delivery of cloth from a manufacturer in a manufacturing centre. The effect of the notification is that such commission agents and dealers are prohibited from selling the cloth of which they have taken delivery except in accordance with the permits issued by the Textile Commissioner or under his authority.

Rags Exempted from Control

By a notification in the *Gazette of India* dated 21st July, the Textile Commissioner to the Government of India has exempted jarans and rags, including mill rags cut from the ends of cloth pieces after processing, from the operation of those clauses of the Cotton Cloth and Yarn (Control) Order, 1945, which refer to price marking and time for disposal of cloth. This exemption applies to pieces which are not longer than 72 inches or wider than 9 inches. It also applies to those pieces which do not exceed 6¼ square feet and are not wider than 43 inches in any direction. The notification does not, however, apply to handkerchiefs, napkins or towels.

Bihar Cotton and Yarn (Control) Order, 1945

The Bihar Cotton and Yarn (Control) Order, 1945, supersedes the Bihar Cotton Cloth and Yarn Dealer's (Licensing and Control) Order, 1944, and contain the following important changes:

(*a*) Provision has been made for directions regarding the channel of distribution and for selection of importers (clause 7 of the Order) to enable schemes of rationing to be put into force.

(*b*) The annual licensing fees are Rs. 10, Rs. 5 and Rs. 2 for wholesale dealers, retailers and hawkers, respectively.

(*c*) Distinction between the wholesale and retail dealers is based on the nature of business rather than the volume of business.

(*d*) Wholesale dealers cannot sell cloth to consumers direct.

(*e*) Licences already issued under the old Order will be valid up to the end of December 1945, but will be subject also to the new conditions imposed by this Order.

(*f*) Persons who have not dealt continuously in cloth or yarn during 1940 to 1942, shall not be entitled to wholesale and retail dealers' licences without the previous sanction of the Provincial Government and the District Magistrate, respectively.

Situation in Bihar

2,416,033 and 2,770,872 yards of standard cloth were received and sold respectively in Bihar in April 1945.

The total quantity of mill-made cloth, including standard cloth, despatched to Bihar during April 1945, from the main producing centres outside the Province was 23,440,500 yards against a monthly quota of 26,757,000 yards (based on 10 yards per head of the population per year).

Forty-eight cases for the contravention of the provisions of the Cotton Cloth and Yarn (Control) Order, 1943, and the Bihar Cotton Cloth and Yarn Dealers (Licensing and Control) Order, 1944, were instituted in April 1945, bringing the total of cases instituted from the beginning of cloth control to 580. Thirty-three cases were disposed of during the month, bringing the total of cases disposed of from the beginning to 345; 6 resulted in conviction and 6 in acquittal and 21 were withdrawn in the month. The total corresponding figures from the beginning of the cloth control are 19,781 and 67 respectively.

Eighty-three licences under the Bihar Cotton Cloth and Yarn Dealers (Licensing and Control) Order, 1944, were cancelled otherwise than on conviction in April 1945, bringing the total of licenses thus cancelled from the beginning to 734.

No Second-hand Textile Machinery to be Imported

Mr. D. M. Khatau, Chairman of the Post-war Planning Committee (Textiles), desires to bring to the notice of all cotton textile mills in India and parties who may wish to erect such mills in the post-war period that the Committee have recommended to Government that imports of second-hand and/or reconditioned textile productive machinery such as blow-room machinery, cards, speed frames, ring frames, doubling frames, winding machines, warping machines, looms, etc., should not be permitted.

Zinc Chloride Control Order

The Central Government has, by a notification published in the *Gazette of India* of 4th August 1945, promulgated the Zinc Chloride Control Order, 1945, which is a verbatim reproduction of the Order promulgated in 1943 which has been repealed. The notification provides that all orders and notifications issued under the old Order should be deemed to have been issued under the new Order. Zinc chloride for use in the cotton textile industry can be purchased or acquired by any person only under a valid licence granted by the Textile Commissioner. For other purposes zinc chloride can be purchased or acquired under a licence granted by the Controller of Chemicals, Supply Department, New Delhi. The licence granted will specify the quantity and the name of supplier from whom it may be acquired. Dealers are forbidden from selling or otherwise disposing of zinc chloride except in accordance with the terms of the licence. All manufacturers, stockholders and dealers in zinc chloride are required to submit returns of the stocks from time to time according to the directions of the Textile Commissioner.

Hydrosulphite of Soda Control Order

By a notification published in the *Gazette o India* dated the 4th August 1945, the Central Government has promulgated the Hydrosulphite of Soda Control Order, 1945. This Order is a verbatim reproduction of the Order promulgated in 1943 which has now been repealed. All orders and notifications issued under the old Order should be deemed to have been issued under the new Order. The Order prohibits the purchase or sale of hydrosulphite of soda except under a licence granted by the Textile Commissioner, and makes supplemental provisions for carrying out the objects of the Order.

Baling Hoops

The Government of India have decided to allow the import of cotton baling hoops from the United Kingdom through commercial channels to meet demands to cover the 1946-47 ginning season.

* * *

More Egyptian Cotton

PROGRESSIVE increase in Egypt's cotton-growing area is reported by the Ministry of Agriculture. The area planted to cotton this year is 984,771 feddans (948,710 acres). This is 15.4 per cent. more than last year which in turn was 19.6 per cent. more than the area planted in 1943.

Distribution of different varieties over this increased area has not yet been announced, but it is safe to assume that the Karnak variety, which gives high yield to growers but which many spinners are reluctant to buy if other types are available, will again account for well over one-half of the total.

The Egyptian Government has announced that it intends to restrict next year's sowing of this variety.

In British cotton circles there has been considerable criticism of Egypt's policy of concentrating on varieties giving high yield per feddan instead of giving overseas purchasers the benefit of choice.

Indian Mill Finance

Working of Textile Companies

Elphinstone Spinning and Weaving Mills Co., Ltd.

(Agents: Chidambaram Mulraj & Co., Ltd., Bombay)

For the year ended 31st December, 1944, after meeting all working expenses including special dear food allowance, providing for the bonus to the operatives of two months' pay on their average earnings in 1944 (payable in 1945) and setting aside Rs. 26,50,000 for estimated tax liability on the profits of 1944, the result of the year's working shows a profit of Rs. 11,11,506, to which must be added the balance brought forward from 1943 of Rs. 44,950, making a total sum of Rs. 11,56,456.

Out of this amount the directors have appropriated for depreciation Rs. 7,00,000, leaving a balance for the year of Rs. 4,56,456 available for disposal, which they recommend may be dealt with as follows:—

To payment of a dividend of Rs. 7 per share (subject to income-tax) on 25,000 7 per cent. cumulative preference shares of Rs. 100 each for the year 1944 Rs. 1,75,000; Rs. 5 per share (free of income-tax) on 50,000 ordinary shares of Rs. 50 each for the year 1944 Rs. 2,50,000; to be carried forward Rs. 31,456.

The mill machinery, buildings and stocks are insured for Rs. 1,84,55,600 and standing charges are insured for Rs. 4,90,000 covering a period of two years.

Edward Textiles, Ltd.

(Agents: E. D. Sassoon & Co., Ltd., Bombay)

For the year ended 31st December 1944, after meeting all working expenses, including special dear food allowance, providing for the bonus to the operatives of two months' pay on their average earnings in 1944 (payable in 1945) and setting aside Rs. 27,60,000 for estimated tax liability on the profits of 1944, the result of the year's working is a profit of Rs. 9,07,637. To it must be added the balance brought forward from 1943, Rs. 1,47,525, making a total sum of Rs. 10,55,162

Out of this amount the Directors have appropriated for depreciation Rs. 1,99,776, leaving a balance for the year of Rs. 8,55,386 available for disposal, which they recommend should be dealt with as follows:—

To payment of a dividend for the year ended 31st December 1944 at Rs. 15 per share (free of income-tax) Rs. 1,27,500; to reserve for compulsory E.P.T. deposit Rs. 6,35,000; to be carried forward Rs. 92,886.

An amount of approximately Rs. 6,35,000 will be due for payment during 1945, as a compulsory E.P.T. deposit under section 2 of the Excess Profits Tax Ordinance, 1943, and this amount has been provided as a reserve for compulsory E.P.T deposit.

The mill machinery, buildings and stocks are insured for Rs. 1,72,12,100 and standing charges are insured for Rs. 25,44,000 covering a period of two years.

India United Mills, Ltd.

(Agents: Agarwal & Co., Bombay)

For the year ended 31st December 1944, the company shows a profit of Rs. 2,45,54,897 before providing for taxation and depreciation on fixed assets. This sum together with Rs. 6,38,197 brought forward from the previous year makes in all Rs. 2,51,93,094.

The directors recommend the appropriation of this sum as follows:—provision for taxation Rs. 1,66,00,000 (amount for 1944 Rs. 1,72,00,000 less excess amount provided in previous years Rs. 6,00,000); depreciation account Rs. 26,00,000; general reserve Rs. 26,00,000; old employees' pension and gratuity fund Rs. 25,000; payment of dividends, free of income-tax, for the year ended 31st December 1944:—(*a*) dividend at As. 15 per share on ordinary shares Rs. 18,75,000; (*b*) dividend at As. 3 per share on deferred shares Rs. 9,37,500; to be carried forward to next year's accounts Rs. 5,55,594.

A compulsory deposit amounting approximately to Rs. 38,00,000 will have to be made during the course of this year to the Government of India when the company's liability for excess profits tax for the year 1944 has been determined in accordance with section 10 of the Indian Finance Act, 1942, as amended under section 2 (1) of the Excess Profits Tax Ordinance No. XVI of 1943 and section 2 (1A) of the Indian Finance Act 1944.

The provisions of the Cotton Cloth and Yarn (Control) Order have been further extended from time to time during the past year and have been mainly concerned with the control of distribution. The fixation of ceiling prices for cloth and yarn, which was brought into force in the latter part of 1943, has continued and three successive cuts in these prices were made by the Textile Control Board during 1944.

As in recent years, a large portion of the company's plant (the entire output as regards Dye Works) was employed on production of goods for war purposes and other Government orders.

In pursuance of the company's policy of extending welfare work for the benefit of operatives, the baby creche and dispensary at No. 4 mill was re-housed in reconstructed premises during the year and the new accommodation thus provided has given increased space and amenities.

The company's buildings, machinery and stocks stood insured as at 31st December 1944 for Rs. 12,41,11,000 against fire, riot and civil commotion. Under the War Risks Insurance Ordinances the company's buildings, machinery and stocks were also insured.

The profits have been insured for Rs. 5,51,60,000 and standing charges for Rs. 1,39,56,000 covering a period of two years.

Shree Niwas Cotton Mills, Ltd.

(Agents: The Marwar Textiles (Agency) Ltd. Bombay)

The directors submit the tenth annual report together with the audited balance sheet and profit and loss account for the year ended 31st December 1944.

The profit and loss account, after meeting all expenses and after adjusting profit and loss on sale of car and investment, shows a profit of

Rs. 69,41,741-1-2, to which the balance brought forward from 1943, i.e., Rs. 3,06,920-7-4 is added, making a total of Rs. 72,48,661-8-6.

The directors have made the following provisions:—provision for depreciation Rs. 1,75,000; provision for taxation Rs. 52,90,000; and reserve fund (E.P.T. Deposit) Rs. 10,00,000, leaving a balance of Rs. 7,83,661-8-6. They recommend that it be disposed of as under:—

To payment of dividend at the rate of Rs. 4 per preference share (free of income-tax) Rs. 19,200, to payment of dividend at the rate of Rs. 20 per ordinary share (free of income-tax) Rs. 4,80,000, and to be carried forward Rs. 2,84,461-8-6.

According to the resolution of the shareholders of the company passed at an extraordinary general meeting of the company held on the 21st June 1944, the directors have capitalized a sum of Rs. 4,80,000 by issuing 4,800 4 per cent. redeemable cumulative preference shares of Rs. 100 each fully paid up, out of the reserve fund of the company. The consent of the Government of India was obtained for this issue.

The company's liability to income-tax, supertax and excess profits tax for the period upto 31st December 1943 has been settled. The necessary provision for income-tax, super tax and excess profits tax for the year under review and for compulsory E.P.T. deposit has been made, as mentioned above.

The sum of Rs. 9,00,000 provided last year under the head "reserve for compulsory excess profits tax deposit" has also been transferred this year to the general reserve fund of the company.

The company's plant, buildings and stocks as at 31st December 1944 are insured against loss by fire and all riot risks for Rs. 2,10,54,213. Buildings, machinery and stocks are also fully covered under the Government of India War Risks Insurance Ordinances. The profit and fixed charges have been also insured for Rs. 65,00,000 against stoppage by fire and all riot risks.

Simplex Mills Co., Ltd.

(Agents: Forbes Forbes Campbell & Co., Ltd., Bombay)

The accounts for the year ended 31st March 1945 show a profit of Rs. 55,51,187, to which is to be added the net "carry forward" from 1944 Rs. 41,566, which produces a total of Rs. 55,92,753.

An interim dividend of Rs. 4 per share was paid during the year, absorbing Rs. 1,12,000, and leaving a balance of Rs. 54,80,753.

The following transfers have been made:—Machinery and building depreciation fund Rs. 2,00,000; machinery renewal reserve account Rs. 6,50,000; taxation reserve Rs. 42,55,500, leaving available the sum of Rs. 3,75,253.

From this balance the directors recommend the declaration of a dividend of Rs. 8 and a bonus of Rs. 4 per fully paid and consolidated share of Rs. 50 each, free of income-tax, which will absorb Rs. 3,36,000 leaving a balance to be carried forward of Rs. 39,253.

During the year the company redeemed debentures to the extent of Rs. 1,50,000.

The mill building, machinery and other properties have been insured for the sum of Rs. 1,56,56,100. These properties are also insured against riot and civil commotion risk. The company's profit and standing charges are insured for Rs. 72,47,000 with 18 months' indemnity.

The mill building, machinery, stores, stocks and stock-in-trade have also been insured under the Government of India War Risks Insurance Schemes.

Gokak Mills, Ltd.

(Agents: Forbes Forbes Campbell & Co., Ltd., Bombay)

The accounts for the year ended 31st December 1944 show a profit of Rs. 43,58,364, to which is to be added the net carry forward from 1943 Rs. 20,956, which produces a total of Rs. 43,79,320. An interim dividend of Rs. 6 per share was paid during the year, absorbing Rs. 2,34,282, leaving a balance of Rs. 41,45,038. The following transfers have been made:—Depreciation Rs. 2,00,000, machinery renewal reserve account Rs. 3,00,000, taxation reserve Rs. 32,12,200, leaving available the sum of Rs. 4,32,838.

From this balance the directors recommend the declaration of a final dividend of Rs. 9 per share, free of income-tax (making 15 per cent. free of income-tax for the year) which will absorb Rs. 3,51,423, bonus to staff Rs. 36,000 leaving a balance to be carried forward of Rs. 45,415.

The mill buildings, machinery, stocks and stock-in-trade are insured for Rs. 1,95,74,400 and profits and fixed charges have been insured for Rs. 72,15,000 covering a period of 18 months. The mill property at 31st December 1944 was insured against riot and civil commotion risk to the extent of Rs. 1,12,15,550 and stocks were insured at that date for further Rs. 83,53,050.

The mill buildings, machinery, stores, stocks and stock-in-trade have also been insured against the Government of India War Risks Insurance Schemes.

Aurungabad Mills, Ltd.

(Agents: Doraswami Iyer & Co., Bombay)

The profit and loss account for the year ended 31st December 1944 shows a profit of Rs. 6,85,020-10-3, which together with Rs. 44,566-14-8 brought over from last year's account makes a total of Rs. 7,29,587-8-11. From this amount a sum of Rs. 28,419-6-3 has been deducted, it being the balance of remuneration due to the managing agents for the year 1943, as per the amended managing agency agreement, which leaves a sum of Rs. 7,01,168-2-8 available for disposal.

The directors propose to dispose of this amount as under:—To provision for excess profits tax and deposit for the year 1944 and also towards the arrears of deposits for the previous years Rs. 5,25,000; to debenture redemption fund Rs. 35,000; to depreciation fund Rs. 18,746; to declare a dividend at the rate of Rs. 6 and a bonus of Rs. 3 per share Rs. 1,08,000 and to carry forward to the next year's account Rs. 14,422-2-8.

The directors have insured the company's properties against fire inclusive of all riot risks for a total sum of Rs. 38,45,875 and have further insured against loss of profits and standing charges for the sums of Rs. 8,00,000 and Rs. 5,50,000 respectively covering indemnity for 24 months. The usual war risk insurances as per Government regulations have been effected.

REVIEWS

The Indian Cotton Textile Industry (1944 Annual). Edited by M. P. Gandhi. Gandhi & Co. (Publishers), Jan Mansion, Sir Pherozeshah Mehta Road, Fort, Bombay. Price: Rs. 5-0-0.

The latest edition of this annual is, as usual, an up-to-date reference book to the Indian textile industry. There is much in what it says regarding the administration of control measures and Government's taxation policy which may find general agreement. The publishers have given their due meed of praise to the cotton millowners for the way in which they have co-operated with Government whether in the matter of standard cloth production or in the matter of the successive price reductions to which they have had to submit. So far as the depreciation allowances are concerned, the publishers refer to the fact that when war broke out the plant and equipment in Indian mills were at a very low level of efficiency having for long before then been due for replacements and renewals, which could not be carried out owing to the depression, and that they have borne heavy war orders heroically and that post-war machinery renewals and replacements should, therefore, receive first consideration. While granting that the depreciation allowances at present allowed are inadequate, the publishers seem to hold that the system of compulsory deposit of the excess profits tax introduced in 1943-44 should prevent "the mills from playing the prodigal son to perfection" and that the war effort "has helped the industry to stabilize itself to a small extent financially."

Although the publishers would raise India's *per capita* cloth consumption ultimately to at least 30 yards a year, they agree with the Government's target of a 50 per cent. rise in the aggregate production, perhaps making a *per capita* consumption of 18 yards a year in the first five years after the war. This 50 per cent. increase in production would mean an aggregate of 7,200 million yards (now it is 4,800 million yards), and for weaving the difference of 2,400 million yards 600 million pounds of yarn would be necessary. In terms of spindles and looms, this might mean an additional 3½ million spindles and 1 lakh looms. They suggest that the Government of India should arrange for their imports from England in the next 10 years and supply them to the Indian cotton mills at fixed prices. The suggestion has been made before although the official reactions to it are not yet clear.

The Annual gives, as usual, a brief history of the industry in the pre-war period, which will be helpful to a general appraisal of subsequent developments. "The cotton industry at a glance" tables deal, *inter alia*, with the progress of cotton mills in India from 1932 to 1944, the acreage and yield of the Indian cotton crop, the imports and exports of cotton, cotton twist and yarn and cotton manufactures.

The publishers have dealt at length with the problems of cultivation, export, import, consumption and prices of raw cotton in an appendix in order that it may be of some use to commerce students who have to study the subject as part of their B.Com. course. In view of the great importance of the handloom industry and its potentialities in the post-war period the subject has, as usual, been given a separate appendix.

The Bombay Plan: A Criticism. By Prof. P. A. Wadia and Prof. K. T. Merchant. Published by the Popular Book Depot, Lamington Road, Bombay. Price: Re. 1-8-0.

Here is an unsparing piece of criticism of the Bombay Plan directed from a new angle. The work does not discuss the statistical data and details of the scheme but only considers the broader questions raised by the Plan. After analysing the different aspects of the Plan, the authors arrive at the conclusion that its sole object seems to be the "profitable utilization, at the end of the war, of vast accumulations of capital, accumulations that were made possible for our business men and financiers through war-profiteering." This thesis is sought to be supported by a series of highly plausible and cogent arguments which will amply repay careful perusal.

Planning within the present economic structure, the Bombay Plan is criticized

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because it envisages the continuance of the capitalist order and does not, it is held, anticipate any radical departure from the current methods of production and distribution. The authors of the brochure under notice refer to the theories of free trade and free access to raw materials which have lately been gaining more and more currency. They consider that, in the circumstances, fears about India's industrial development and the search for fresh avenues of employment for the huge profits made during the war have been the motivating factor of the Plan. In other words, the Plan, according to them, represents the attempt of capitalism to seek a new lease of life by an *entente cordiale* between Government and industrialists by a kind of amalgam between collectivism and capitalism. A national Government working out a capitalistic order of society with the support and co-operation of industrialists is what is proposed in the Plan. It envisages a sort of mixed economy, one section fully free and the other practically controlled or managed by the State, and the authors of the critical brochure under notice are convinced that "attempts at regulating one part of the economic structure will only sharpen the conflict of competition in the structure as a whole."

It is alleged, further, that, while the Bombay Plan admits the failure of the present system of free enterprise to ensure equitable distribution, the philosophy of gradualism, which it advocates in order to remedy the defect, is woefully inadequate. What the Plan says regarding the disparity to agricultural and industrial wages and the problem of minimum wages is "delightfully vague" and unhelpful. Similarly, Professors Wadia and Merchant would seem to pooh-pooh the idea of "fair selling prices." "Fair to whom?" they ask—to the manufacturer or the consumer? But their selection of cloth prices under control as a target for attack does not appear to be a particularly happy one. Textile prices, no doubt, are still very much higher than before the war, but they have been consistently scaled down since the introduction of control and they are to-day a great deal lower than before. The essential bottlenecks in the scheme of control have always been transport and distribution, but in the sphere of price control a very considerable degree of success has attended official efforts. It is not necessary to deny the possibility of a further scaling down in order to record one's appreciation of the success already achieved in cloth price control.

NOTICES

British Cotton Growing Association's Annual Report for 1944.

Now in its fortieth year, the efforts made by the Association in the growing of cotton in the various colonies and protectorates as well as Anglo-Egyptian Sudan have been attended with substantial success.

Lord Derby, who had been President of the Association since 1910, has resigned for reasons of health.

The following extract from the statement of the Chairman, Sir William H. Himbury, M.A., to the latest annual general meeting will be read with interest:

"The approximate quantity of cotton produced in 1944 in Empire countries and the Anglo-Egyptian Sudan is as it happens the smallest for many years. In Uganda, while the crop was less than one half of its record production in 1938, there was an increase of about 75,000 bales on the previous year. The crop in the Anglo-Egyptian Sudan was the lowest for 10 years and well below the bumper crop of 1943, mainly attributable to adverse weather. Weather conditions affected the crop throughout Africa, but I must repeat what I have said on former occasions, war conditions have imposed a different economy on all these cotton-growing countries and the main work of the African farmer to-day is to produce more food crops, not only for himself but also to provide an exportable surplus."

J. K. Review, 5, 10, July 1945, includes an account of the canteens run by the J. K. Industries, Cawnpore, for the benefit of the employees. They work on a non-profit-making basis and are run on strictly hygienic lines. They cater to the needs of a large body of workers who are able to get wholesome food at moderate prices.

Bombay Chamber of Commerce: Report for 1944. The latest annual report of the Bombay Chamber of Commerce follows the usual lines and includes the proceedings of the last annual general meeting and a general summary of the important subjects covered by the Chamber in its correspondence with Government and at interviews with representatives of Government.

Andhra Chamber of Commerce, Madras: Annual Report for 1944.

Of the several chambers of commerce in South India, the Andhra Chamber has of late been making its voice heard more and more loudly in all matters affecting the economic and industrial future of the country. The latest report contains, as usual, the report of the Committee and abstract of proceedings under the heads of commerce, finance and taxation, miscellaneous and visits.

NEWS OF THE MONTH

Indian

India's Rayon Yarn Quota.—According to trade reports, India has been granted a token allocation of less than 100,000 pounds of rayon yarn for the current quarter year.

Cost of Living in Bombay.—During June the working class cost of living index number for Bombay, with the average prices for the year ended June, 1934, equal to 100, was 235. This was five points higher than in the preceding month. The index number for food articles rose by eight points to 271.

Sind Cotton Industry.—It is understood that plans for starting cotton and wool industries on a large scale in Sind were discussed by some Sindhi merchants with Mukhi Gobindram Pritamdas, Minister for Industries, on Tuesday the 31st July 1945. The Minister stated that Government would extend all possible help in getting the machinery required for the ventures.

Umbrella Manufacture.—The Government of India, it is learned, have launched a big scheme for the production of 153,050 umbrellas. The umbrellas will be produced in Bombay, Ahmedabad, Surat, Jodhpur, Nadiad, Hubli, Bangalore, Calcutta, Madras, Calicut, Mangalore and Delhi. The U.P. will receive its quota of 20,500 umbrellas from Calcutta, Bombay and Delhi.

Consumption of Indian Cotton.—Consumption of Indian cotton by the Indian textile industry in May amounts to 349,942 bales, compared with 326,262 bales for the same month in 1944. The total consumption of Indian cotton by the mills during the nine months ended May is 3,120,123 bales as against 3,094,025 bales in the corresponding period of the preceding season.

Indian-made Artificial Silk.—The Controller-General of Civil Supplies has, in the case of a wholesale transaction in Indian made artificial silk fabrics, sanctioned the addition to the ex-mill price of one anna per rupee of that price. Formerly the sanctioned addition was As. 1-6 per rupee. In the case of a retail transaction the sanctioned addition remains unaltered, that is As. 3-6 per rupee of the ex-mill price.

Textile Calendar

AUGUST

10th and 11th, Friday and Saturday :

All-India Handloom Board meets in Nagpur.

16th, Thursday :

Indian Merchants' Chamber, Bombay, Second Quarterly Meeting.

22nd, Wednesday :

Final All-India Cotton Crop Forecast, 1944-45 estimates.

28th, Tuesday :

Standing Labour Committee meets in New Delhi, the Hon. Dr. B. R. Ambedkar presiding.

Capital Issues Control at Work.—During 1944 and first quarter of 1945, 1,196 industrial applications were received for issue of capital. 1,100 were immediate and 96 long-term. Out of 1,100 consent orders were issued in 864 cases. The main cause for refusal was the war-time pressure on materials and services in short supply, including coal and transport. Of the 864 successful cases, 362 were for initial issues by new companies and 502 for further issues by old companies. The amounts of the approved issues were Rs. 16.05 crores initial issues and Rs. 20.52 crores for further issues. Spinning and weaving mills were among the principal industries contributing to the further issues. Consent orders were issued to the extent Rs. 375 lakhs for spinning and weaving mills (56 cases).

Consumer Goods for Civilians : Larger Supplies this Year.—A gradual switch-over of Indian economy from war-time basis to peace-time requirements has started. A beginning has been made with Indian industries whose production was hitherto mostly absorbed by the demands made by the Defence Services. It is hoped that the supply of consumer goods to the civilian population of the country will continue to be on the up grade, and the position is expected to show a substantial improvement during the next six months.

The orders placed by the Defence Services for textiles have also been cut down for the current half-year. This will enable the industry to augment the supplies by about 2,700 bales which, it is gathered, have been allocated to the United Provinces, Bengal, and Sind.

India's Scientific Advancement: Offer of Research Fellowships.—Research fellowships in chemistry, physics and biology worth Rs. 3,36,000 are being given to the National Institute of Science of India by Imperial Chemical Industries (India) to encourage the advance of science in India and help the country's general prosperity.

The fellowships will be available over the next five to seven years.

Each fellowship is to be worth Rs. 400 a month, and will be tenable for two years with the possibility of extension to three years. In addition, there will be a grant for research expenses to be made to the fellowship holders according to their needs of special apparatus and materials. The fellowships will be open to persons irrespective of sex, race or religion under 35 years of age. The overriding qualification for membership will be scientific ability.

Loyal Mills Recreation Club, Kovilpatti.—The fourth anniversary of the above club was celebrated on the 29th July, 1945. In the morning sports were conducted in the presence of Mr. S. Heys, Manager of the Loyal Mills, and Mrs. Heys. Business meeting was held and office-bearers were elected for the ensuing year. In the evening, under the presidentship of Mr. S. Heys, Rao Sahib M. V. Subramaniam, Lecturer, St. John's College, Palamcottah, delivered a lecture in English on "Post-war Europe." Another lecture in Tamil was given by Mr. A. S. Raghavan, Lecturer, Hindu College, Tinnevelly, and both the lectures were highly appreciated. Mrs. Heys was kind enough to distribute the prizes to the winners in the sports. After the president's speech the meeting ended with a vote of thanks to the chairman and to Mrs. S. Heys and to the lecturers. The celebrations came to a successful termination with a grand dinner at night.

Workers to Hold Shares: Novel Bangalore Factory Scheme.—A new large-scale factory for the manufacture of soaps and allied products will soon come into existence in Bangalore, due to the enterprise of Mr. B. M. Srinivasiah, an industrialist of Bombay, with a capital of Rs. 25,00,000.

Mr. Srinivasiah's scheme seeks to cut across the age-long capital-labour dispute by providing 25 per cent. interest for the workers employed in the concern.

Twenty-five per cent. of the capital will be made up of funded profits earned on such shares which will be allotted to the workers on a graduated scale. Provision has been made for workers to acquire shares in the non-reserved portion of the capital. The scheme provides for a liberal measure of amenities, such as commodious houses, facilities for recreation, games, sanitary arrangements, canteens, hospitals, schools and creches for the benefit of the employees and their families.

Consumer Goods Order: Revised Notification.—By a notification published in the *Gazette of India* dated 21st July 1945, the Central Government have reissued the Consumer Goods (Control of Distribution) Order, 1944. The revised notification incorporates all the amendments which were made from time to time in the former order, says a press note.

The order requires importers to furnish to the Controller-General details of consignments of scheduled articles expected by them and how they propose to dispose of them within one week of their receiving intimation of the despatch of the consignment. They are also required to give within two weeks of arrival details of goods actually arrived and their landed cost. Except as directed by the Controller-General, importers are not at liberty to dispose of such scheduled articles within 21 days from the latest date on which any of the items of information required to be submitted to the Controller-General after the arrival of goods in this country, is received in his office. If within this period the Controller-General does not issue any disposal instructions, the importer then may dispose of the articles in such manner as he thinks fit, subject to the other provisions of the order.

Edouard Dubied & Co., Switzerland.—Messrs. Sapt Textile Products (India) Ltd., Post Box 318, Bombay, who are the sole agents for India of Messrs. Edouard Dubied & Co., of Neuchatel, Switzerland, have now resumed the import of knitting machines, spare parts and needles of these well-known manufacturers. To their wide range of models of flat knitting machines for all purposes, both hand and power driven, the factory has recently added a model of a circular knitting machine.

Textile Machinery from America ?—Speaking at a Washington, U.S.A. gathering, Mr. A. D. Shroff, a member of the Indian Industrial Mission, said that some American manufacturers did not seem alive to the prospects for profitable sales in India and added that there seemed to be no apparent desire by American manufacturers of textile machinery to make machines appropriate to India's needs which differed from those of the United States.

But Dr. Lokanathan, Secretary of the Mission, has something different to say. " At present," he observed, " the position is undoubtedly rather tight, but it has improved very much, and in a few months it will improve even more. The process of reconversion is moving fairly rapidly.

" There is the great problem of financing India's purchases in America, but there is every indication that projects of utility and urgency would quite easily find the necessary capital through the export-import bank, or other Government agencies.

" American officials will be glad to render all possible aid to ease India's position, but, primarily, this problem is for India and Britain to decide."

Dr. Lokanathan had seen huge stocks of unused surplus machinery stored away uselessly in sheds all through the Middle East.

" I have seen whole factories for textile production ready for assembly. These factories could be purchased immediately, if dollar exchange was available at a cost of about 1,000,000 dollars or 2,000,000 dollars for a complete factory.

"With the magnitude of this surplus material stock in the United States, it could be of great interest for India to have an organization right now in America in a position to make reports on surplus plants available for private interests."

Handloom Discussions at Nagpur.—" The inaugural meeting of the All-India Handloom Board concluded its deliberations on 11th August after recording its views on some of the major questions affecting the Indian handloom industry, including the question of fixation of prices of handloom products," says a Press note.

" These views will be examined by the Government of India and their considered views on each one of the points raised will be conveyed to the Handloom Board at its next meeting which will be held some time in October this year."

The Handloom Board elected the Hon'ble Mr. Hossain Imam as its representative on the Cotton Textile Fund Committee constituted by the Government of India for the administration of the Cotton Textile Fund.

Following the opening address by the Hon'ble Sir Azizul Haque, a general discussion took place when representatives from different provinces gave vent to their feelings about the present distribution scheme of yarn. They also expressed their views on the proposed price control of handloom cloth. No decision was reached.

It is understood that emphasis was laid by many non-official representatives on the need for the Government taking immediate steps to make textile mills produce more yarn as that, in the opinion of the speakers, was the only way by which handloom weavers could get yarn at controlled rates.

Dispute over Dearness Allowances in Ahmedabad and Gujerat.—The conciliation proceedings in the dispute between the Millowners' Association and the Textile Labour Association regarding the continuance of dearness allowance after 8th August have failed.

The Millowners' Association refused to pay dearness allowance after the end of the European war, in accordance with the agreement reached with the Labour Association on 28th February 1940, but the Industrial Court recently ordered the continuance of the allowance till 8th August. The Labour Association demanded its continuance after 8th August, which the Millowners' Association declined to do. The dispute came before the Assistant Commissioner of Labour for conciliation, but representatives of the two associations who appeared before him could not come to an agreement. The question has been referred by the Millowners' Association to the arbitration of the Industrial Court under the following conditions; first, both the parties will be entitled to urge their respective contentions before the Industrial Court. Second, the award of the Industrial Court will be liable to be terminated by either party on six months' notice to the other side. Lastly, the award will be subject to revision by the Industrial Court at the instance of either party.

The question of the continuance of the dearness allowance to the 2,00,000 textile workers of Gujarat is attracting attention in mill circles.

Notices have already been issued by the millowners that the dearness allowance given at present will be stopped after 8th August. The workers all over Gujerat have appealed, and in some cases have sent notices, to the millowners that, as the circumstances in which the dearness allowance was granted were still existing, the allowance should be continued till the prices come down. The millowners are not inclined to pay dearness allowance at the present rate.

The Industrial Court recently decided that the employers should neutralize only 66⅔ per cent. of the increase in cost by paying an allowance. In Ahmedabad at present the mills are neutralizing 96 per cent. of the increased cost, while in Bombay and Deccan 75 per cent. is being paid as allowances. The millowners feel they have also to reckon with a market which tends to go down day by day and they should prepare for a period of depression.

Textile Association (India) "At Home."—Members of the Managing Committee and the Sub-Committees of the Textile Association (India), were "At Home" to Dr. Nazir Ahmad, O.B.E., Ph.D., F.Inst. P., J.P., President of the Association and Mr. Nandulal M. Mehta, B.A., LL.B., Chairman, Managing Committee of the Association, on Tuesday, the 14th August, 1945, at the Pranlal Mafatlal Swimming Bath, Chowpaty, Bombay.

After a pleasant dinner, Messrs. D. P. Joshi, S. D. Oke and Principal P. N. Joshi of the V.J.T. Institute, Bombay, eulogized the services of Dr. Nazir Ahmad and Mr. Nandulal M. Mehta in the cause of the Association, especially in organizing the Prize Essays and Designs Competition schemes and the 1st and 2nd All-India Textile Conferences. The speakers hoped that the Association would continue to have the two distinguished guests at its helm for years to come.

In his reply Dr. Nazir Ahmad stated that Research work in U.K. and the United States of America was so fruitful because enormous sums were spent by each industry on research laboratories. He suggested that in a vast country like India regional laboratories, on U.S.A. lines, would be more useful than that of centralized laboratories as in England. He added that the Textile Association (India) had great scope for increasing its utility to the industry and stated that a scheme was being formulated for getting monographs prepared on such vital subjects like "Possibilities of manufacturing Textile Machinery in India," etc. He thanked the hosts for their kindness and assured them that whether in or out of the Association he would do his best to increase the scope of the Textile Association (India).

Mr. Nandulal M. Mehta reiterated the same sentiments towards the Textile Association (India). He suggested that the Textile Association (India) could take up the work of organizing classes for textile workers and for issuing competency certificates to jobbers, fitters and weavers.

Foreign

U.K.C.C. to Continue.—Rumours that the United Kingdom Commercial Corporation would soon be liquidated are officially denied. V-E day automatically ended some of the activities of the U.K. C.C., but official policy is that the U.K. C.C. shall continue its remaining work. One of its branches, namely, the U.M.C.C. in Spain, is being voluntarily liquidated and a liquidator was appointed three weeks ago.

Indian Jute Fibre for U.S.—The War Production Board proposed an allocation of jute fiore for shipment from India to the United States for the six-month period from 26th June to 25th December, but the amount was not disclosed.

The proposal was presented to the Jute Spinner Advisory Commission and would include a quantity marked for shipment to the United States for the three-month period starting 26th June.

U.S. Cotton Shippers' Deputation in U.K.—A deputation of the American Cotton Shippers' Association arrived in Liverpool, England, on 24th July 1945 and discussed with the Directors of the Liverpool Cotton Association many problems connected with restoring private trading in raw cotton.

It is understood that, before returning to the United States, the deputation will visit the continent for similar consultation with French, Belgian, Dutch and other continental cotton trade leaders.

British Exports: Trade Research Body Starts Work.—The British Export Trade Research Organization (Betro) has now started operation with 99 founder and, 112 ordinary member firms. The Chairman of B.E.T.R.O. says that the number of founder members (why pay an annual subscription of £500 for no greater privileges than the ordinary members who pay £100) shows that industrialists recognize that Britain's foreign trade must be based on accurate and continual surveys of overseas markets. B.E.T.R.O. is now recruiting skilled staff for market research.

U.S. Cloth for India.—The U.S. Government's Federal Economic Administration announced on 3rd inst. an export programme under which India, including Bahrein Island and Kuwait, will get more than 1,000,000 yards of rayon broad goods from the United States. The programme calls for the export of 12,000,000 yards of woven rayon to non-American countries. India heads the list. A statement said that India's estimated quota of fabricated rayon called for between 50,000 and 100,000 yards of broad goods and from 2,000 to 5,000 lbs. of knitted items.

Soviet Textile Industry and Civilian Production.—The Soviet textile industry is increasing production for civilian needs. Restoration of wrecked mills is proceeding apace and more than 100 enterprises have already been partially repaired and put into production. New textile industries have been built during the war, including 20 in the Tatar republic. Uzbekistan and Turkmenia. New mills will soon be opened in Novosibirsk and Kazakhstan. Particular attention is being paid to increasing the variety of clothes and improving their finish. Art departments have been organized in the largest mills.

British Textile Industry: Grant for Research.—A grant of Rs. 4,00,000 minimum yearly has been made by the Department of Scientific and Industrial Research to the British Cotton Industry Research Association at the Shirley Institute, Manchester.

The grant is subject to the Association's industrial income reaching Rs. 9,30,000 and will be increased by an additional rupee for rupee on incomes over this amount up to a maximum of Rs. 6,70,000.

The Director of the Institute said that it was proposed to set up an engineering department, the results from which would have a considerable influence on the design and development of textile machinery.

International Labour Conference : 27th Session to Meet in Paris.—The twenty-seventh session of the International Labour Conference, which is to be held in or near Paris, will open in September. The precise date and place of the meeting will be announced later.

Each member State will be represented at the Conference by two Government delegates, one employers' delegate and one workers' delegate. The duty of nominating the personnel of the entire Indian delegation rests with the Government of India which, under the terms of the Treaty of Versailles, has undertaken to nominate non-Government delegates and advisers chosen in agreement with the industrial organizations most representative of employers or workers.

World Cotton Estimates.—The United States Department of Agriculture, in an official statement on 31st July, estimated that world cotton production for 1944-45 would decline more than 1,000,000 bales from last year.

The decrease is due mainly to the "sharp reduction of India cotton acreage" and very unfavourable weather in Latin America, the report said.

The estimate said that reports from China indicated that cotton production was increasing there, both in Chinese and Japanese controlled areas. It also pointed out that incomplete data indicated that Russian yields increased due to new irrigation systems.

The department estimated that world production would be about 25,500,000 bales of 478 lbs. net, as against the previous total of 26,580,000 bales last year.

Lancashire Cotton Mills.—It is officially reported that only 20 Lancashire cotton mills out of the 108 mills closed have been reopened, and these are working at less than 50 per cent. capacity. It is estimated that the industry lacks 70,000 operatives. Proposals to remedy the acute man-power and production shortage in the cotton industry were discussed on 1st August by Mr. Oliver Lyttelton, President of the Board of Trade and Minister of Production, with leaders of the cotton trade.

Mr. Lyttelton told *Reuter* that the discussions were about "a policy which is to be jointly agreed with Government and which would really begin a strong, resolute and hopeful attack on problems of the industry, and chiefly the problem of manning it."

"If all goes well, something which I shall consider important will come out of it," he indicated.

Change of Directorate.—Messrs. Benson Leathers Limited, Yorkshire Leather

Works, Longside Lane, Bradford, Yorkshire, England, inform us that they have made a change in the Directorate of their company, which will now be as follows: — Messrs. Geoffrey D. Holmes, Chairman of Directors; Robert Benson, Permanent Managing Director; Raymond Wadsworth, Director of the Vernier Department; and Ben Hutton, Director of the Leather Department.

The two additional Directors, Messrs. R. Wadsworth and B. Hutton, were formerly managers in the departments to which they have now been elevated to a seat on the Board. The promotions have been gained chiefly on account of the valuable services which they have rendered to the company during the years of the war.

In their associated company, The Benson Vee Leather Company of the same address, they have also added Mr. Walter Taylor, formerly Manager of the Vee Leather Department, to a similar position on the Board of Directors of this company.

Manchester Joint Research Council.—The Manchester Joint Research Council (which is representative of the Manchester University and the Manchester Chamber of Commerce) has appointed Mr. A. D. Buchart, as executive liaison officer.

One of the objects of the Council is "the encouragement of activities designed to bring science and industry into closer relationship." As a practical move to give effect to this, the Council is creating an information service. Mr. Buchart will be in charge of this. The service does not aim at furnishing the scientific answer to the problems submitted, but at placing the inquirer with that scientific institution or authority best able to deal with each particular subject.

Until a permanent office is established contact can be made with the executive liaison officer, by applying to him at the Manchester Chamber of Commerce, Ship Canal House, Manchester, 2.

Company Dividends.—Tweedales and Smalley (1920), textile machine makers, of Castleton, have declared a final dividend of 12½ per cent. making with the interim a total of 17½ per cent. for the year. For 1943-44 the final was 7½ per cent., making 12½ per cent.

The balance sheet of **Howard and Bullough (Securities) Ltd.** shows an issued capital of £1,500,000 in preference and ordinary stock, reserve fund £120,000, dividend reserve £221,700, creditors and amounts accrued £942, final dividends £35,000, credit balance £1,669, land and buildings, £20,329, shares in Textile Machinery Makers Ltd. £1,537,014, investments £298,069, debtors £11, cash at bank and in hand £25,440.

The directors of **Textile Machinery Makers Ltd.** report a trading profit of £1,239,216 for 1944, to which is added £9,153 interest on tax certificates, etc., making a total of £1,248,369. The net profit amounts to £107,255, to which is added £42,843 brought forward and £17,832 tax over-provision, making £167,930 available. The dividend on preference stock takes £22,988 and 6 per cent. on the ordinary stock absorbs £76,185, leaving £68,757 to carry forward. Textile Machinery Makers, formed in 1931, has an issued capital of £3,459,000 in £2,539,000 ordinary stock and £919,500 preference stock, of which £2,448,375 ordinary and £407,875 preference is held by Werneth Investment Trust, Asa Lees (Holdings), John Hetherington (Holdings), Howard and Bullough (Securities), and Dobson and Barlow (Securities).

Fifty Years Ago

(From the *Indian Textile Journal*, August, 1895)

Vernacular Edition of the I.T.J.

"A vernacular edition of the *Indian Textile Journal* will be issued on the 20th of each month from October next. The size will be demy-quarto and the printing and general get-up in keeping with the English edition."

New Cotton Mill

"A new cotton spinning and weaving mill with a capital of Rs. 3½ lakhs has been started at Kasipalayam, Pondicherry, South India, by a syndicate of Manchester merchants. The company is called the Industrial Society of Kasipalayam."

The Indian Textile Journal

INCORPORATING:- INDIAN IMPORT & EXPORT TRADES JOURNAL — INDIAN INDUSTRIES & POWER

Founded by SORABJI M. RUTNAGUR

55 th Year

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EDITORIAL

About Control

FOR several months now we have been stressing the importance of ensuring adequate distribution arrangements throughout the country on some rational and intelligible basis. As one writer recently put it, in the first year of control the authorities were busy fixing ceiling prices and in the second year perfecting control over the mill industry. And now in the third year they have turned their undivided attention to the problem of distribution. On the other hand, it has always been one's conviction that, until the distribution end of control was properly and efficiently tackled, the success of control measures would be problematical, for whatever may be the measures formulated in the office of the Textile Commissioner, Bombay, they must depend for their ultimate success on the way Provincial and State Governments implement them. And, as experience has shown, as many ways of tackling the problem have been attempted as there are Provinces and States. The result has been indifferent success in several Provinces and States and utter failure in many. The other day our Indore correspondent referred to the anomalies arising from the different standards of administration at the distribution end of control. The authorities were contemplating the introduction of a more or less uniform scheme of distribution throughout the country to be administered by Provincial and State Governments as the agents of the Central Government. Final powers of decision were to be vested in the latter authority. In Bengal, for example, the problem of cloth distribution having well-nigh become intractable, the control authorities made a concerted attack on it last month and the result has been the promulgation by the Government of India of an Ordinance setting up the Bengal Textile Association. The aims and objects of the Association and its personnel and functions have been clearly laid down and it is to be hoped that Bengal will cease to give any further headaches to Government. Similarly, the demands of several Provinces and States for an upward revision of their cloth and yarn quotas have been carefully examined and every attempt made to meet them satisfactorily. The conference of Provincial and State representatives which met in Bombay early this month left the *per capita* allotment of 18 yards originally made to Bombay and the Punjab untouched, but approved of an increase, ranging from 20 to 25 per cent., in the *per capita* quota allotted to Madras, Bengal and the United Provinces; the *per capita* allotment of 10 yards has since been raised to 12 yards per annum. This increased quota has, however, fallen short of the actual demand of some of the Provinces, but it could not perhaps be helped in the conditions of limited supply prevailing at present. The authorities have been able to make this slight upward revision in the provincial *per capita* allotments on account of the increased production which has come in the wake of the utility cloth scheme and the reduction in export and Defence requirements. The reduction in qualities and types enjoined by the scheme has made it possible for the cotton mills to step up their production; to the extent that it has increased mill consumption of yarn, to that extent is the handloom weaver alleged to have gone short of yarn supplies. One cannot eat one's cake and have it too. But in view of the admittedly vital position which the handloom occupies in any scheme of Indian economic reconstruction and in view of the official recognition of this fact as reflected in the establishment of the All-India Handloom Board, it is desirable that whatever attempts may be made to increase mill production of cloth should not be at the expense of the handloom.

The utility scheme itself, on the other hand, gave rise to certain misgivings regarding the possibility of the Indian market being swamped by imported textiles of fine quality. But Government have given us the assurance that goods finer in quality than those produced in India would not be permitted. Clarifying the point Sir Akbar Hydari explained that, while the Government of India would not permit the imports of piece-goods finer in texture than those permitted under the utility scheme, the Government reserved to themselves the right to continue to permit imports of such lines as the Indian mills had not been manufacturing before the introduction of the utility scheme. While this may mean little or nothing, the public has long been looking forward to a downward revision of cloth prices, particularly in view of the still wide gap between raw cotton and cotton cloth prices and the changed conditions brought about by the termination of the war. When the Textile Control Board met last, its Chairman explained that further reductions in the prices of utility cloth would depend on Government's ability to ensure continuity of work to the industry by making available regular supplies of coal and labour to the industry. Subsequently, we were informed that the cotton mill industry was to be given an additional quota of 10,000 tons for the current year. While this is all to the good, one would appreciate some more light on the actual extent of the progress so far achieved.

A Noble Example

LAST year Imperial Chemical Industries, England, announced the award of eighty research fellowships of £600 each per year in physics, chemistry and allied subjects, tenable at nine of the English universities for a period, in the first instance, of from five to seven years. The gift was based on the realization that fundamental and applied research were interdependent and that, if research in industry is to make any progress at all, fundamental or pure research should not for any reason be allowed to languish. The object, therefore, of the I.C.I. gift was to strengthen the position of British universities in the field of research. The I.C.I. have always been noted for their wise and far-seeing activities and the enormous progress which their research laboratories have witnessed during the war has been testified to by the party of Indian scientists under Sir S. S. Bhatnagar who visited England and America some months ago. The research organization of I.C.I. consists of 900 fully qualified chemists, physicists, biologists, engineers and other scientific men and more than 1,000 skilled assistants. The I.C.I. spent in 1943 alone as much as £2,200,000 on research.

At a social gathering of scientists and industrialists in England last year, Sir Shanti Swarup Bhatnagar paid a glowing tribute to the research policy of I.C.I. and wondered why they should not make similar awards for the benefit of budding talent in India. Lord McGowan then hinted that the eighty research fellowships they had instituted in England were open to all irrespective of nationality, but it is clear that they have been giving serious thought to the suggestion of Sir Shanti Swarup. The announcement that recently appeared in the Indian papers is the result. They propose to award, with the collaboration of the National Institute of Sciences in India, research fellowships in physics, chemistry and allied subjects to the tune of Rs. 3,36,000 annually and tenable for two or three years; besides, they undertake to pay for incidental research expenses including the cost of new equipment and apparatus. I.C.I., along with a few other industrial enterprises like the Textile Machinery Makers Limited, has set an example which others in India will profit by following. The distinction between pure and applied research has lost its significance and leading manufacturers have come to realize the value of research even though it might not bring in dividends immediately.

Indo-Japanese Trade in Raw Cotton and Cotton Textiles

End of War and India's Prospects

THE end of war with Japan—and with it the end of World War No. 2—gives an opportunity to India to improve her position in the post-war period in several markets which were served by Japan before the war. This is particularly true of neighbouring markets such as the Middle East, East Africa, Ceylon, Burma, Malaya and the other South Asiatic countries. According to recent reports of the Government of India Trade Commissioners, there are prospects in certain lines even in distant markets like Canada, the U.S.A., South America and Australia.

What is of greater import is that Japan's dumping of her goods on the Indian market, to the detriment of India's small industries generally and the textile industry in particular, will be a thing of the past. Before the war, the menace of Japanese competition was becoming increasingly serious in the Indian market. Despite the existence of a trade treaty regulating her imports of piecegoods into this country, her traders found methods to circumvent its provisions in various ways. There was an inquiry by the Commerce Department into the nature and extent of Japanese competition in India, with a view to adopting whatever counter-measures were considered necessary to protect the interests of Indian industries. But by the time action could be taken, Japan's competitive position became weakened on account of her preoccupation with her war with China.

All this is now past. India is now free to develop her industries, at least for some time to come, without the menace of Japanese competition. She has, further, an unparalleled opportunity to develop her foreign trade in those goods and in those markets in which Japan had specialized before the war.

How Japan "Respected" Treaty Obligations

The treaty was mainly concluded in the interests of India's cotton grower. For a basic offtake of one million bales of Indian cotton a year, Japan was permitted to export to India 325 million yards (basic) of cloth a year (subsequently reduced to 283 million yards on the conclusion of a separate treaty with Burma). A ceiling of 400 million yards a year (358 million yards subsequently) was fixed and the higher sendings were correlated to higher offtake of Indian cotton. Japan was accorded most-favoured-nation treatment.

But Japan abused her position. She managed to circumvent the treaty obligations by the following, among other, unfair methods:—

1. As the treaty referred to linear yards, Japan increased the width of the piece-goods which she sent to the Indian market.
2. Fents were not included in the treaty. She sent large quantities of this line of piecegoods to the Indian market. Regular pieces were deliberately cut into fents in order to take undue advantage of the lacuna in the treaty.
3. Similarly made up garments were not included. These goods were also sent in increasing quantities to the Indian market.
4. Also, art silk goods were not included in the treaty; Japan began to increase her sendings of these goods to India.
5. There were increased sendings of piecegoods from Japanese controlled mills in North China.

The original treaty was concluded in 1934. The position was somewhat better in the revised agreement of 1937.

Dumping of Japanese Goods

Taking full and undue advantage of the most-favoured-nation position, Japan began to dump her manufactures on India. Large quantities of cheap miscellaneous manufactured goods such as glassware, boots, shoes, hardware, woollen goods, etc., were sent in increasing quantities, thus adversely affecting the position of a large number of small nascent Indian industries and handicrafts. Imports of a large variety of Japanese manufactured goods into India increased in quantity, value and range, while the offtake of Indian goods by Japan considerably diminished in many instances. As a consequence, Japan was able not only to wipe out her adverse trade balance with India but to convert it into a surplus. While imports from Japan became diversified, exports to that country from India were mainly in a few lines, the chief of them being raw cotton. India became predominantly dependent on Japan for the offtake of that commodity, with the result that that market became vital to the prosperity of the Indian cotton grower. Out of the 3 million bales of cotton exported every year, between 1½ and 2 million (mainly short staple) went to that single market. This undue dependence on a single market was not wholesome, the adverse consequences of which were seen when the Japanese market was lost from the middle of 1941 (in addition to the loss of the continental markets from 1940). Had it not been for the success of the " Grow more Food " campaign, which diverted cultivation from raw cotton and other cash crops to foodgrains, and the increased consumption by Indian mills, the position of the cotton grower would have been disastrous during the war period.

Indo-Japanese Trade : Pre-war Trend

The trend of Indo-Japanese trade was as follows before the war:

(Value in lakhs of Rupees)

Year	Value of imports from Japan	Value of exports to Japan	Balance of trade in merchandise in favour of (+) or against (—) India
1934-35 ..	20,80	24,59	+3,79
1935-36 ..	21,84	21,89	+5
1936-37 ..	21,27	30,07	+8,80
1937-38 ..	22,19	18,13	—4,06
1938-39 ..	15,41	14,59	—82
1939-40 ..	19,29	14,16	—5,13
1940-41 ..	21,55	9,19	—12,36
1941-42 ..	11,78	4,77	—7,02

The value of imports from Japan increased between 1934-35 and 1937-38. The subsequent decrease was probably due to the pre-occupation of Japan with her war in China and the consequent inability to maintain the usual scale of exports to her customers. But what is more significant from the point of view of India is the drastic reduction in her exports to Japan after 1936-37, in consequence of which the balance of trade, which was in her favour in 1936-37 to the tune of Rs. 8.80 crores, subsequently became adverse to her and reached the high-water mark of Rs. 12.36 crores (against her and in favour of Japan) in 1940-41.

Diversification of Japanese Imports

To what extent Japanese imports into India became diversified can be seen from an analysis of this trade in 1937-38, when its aggregate value reached the highest level (Rs. 22.19 crores) for the period embraced by the above table.

There are 34 major items of a value exceeding Rs. 10 lakhs each consisting of a number of sub-items. Besides, there are numerous items of value below Rs. 10 lakhs. The diversified character of Japan's exports to India is thus evident. Many of the above items are competitive with similar Indian manufactures. Besides the textile industry of India, other industries which were adversely affected were woollen, silk, glass and glassware, earthenware and porcelain, toilet requisites, electrical goods, handloom (particularly woollen blanket and silk looms), toy making, etc.

India Sent Few Goods

As compared with these diversified exports from Japan, India sent to that country only a very few goods like raw cotton, raw jute and jute manufactures, iron, manganese, lac, leather, mica, and a few others.

Even with a lower limit of Rs. 5 lakhs, there were only 14 main items comprising the export trade of India with Japan in the most prosperous year of the period, viz., 1936-37, when exports amounted to Rs. 30.07 crores and there was a balance of trade in merchandise in favour of India amounting to Rs. 8.80 crores. Of the total value of this trade, about 85 per cent. relates to raw cotton, leaving only 15 per cent. for the rest of the goods exported. Thus, India's export trade with Japan was not only not diversified but predominantly related to a single commodity (raw cotton).

India's Opportunity : Mid-East and East Africa

Japanese competition in the Indian market was a serious menace to the development of Indian industries in the past. This menace has now been removed, at least for some years to come, and in the post-war period this country can plan the development of her industries free from the nightmare of this competition. Not only that: she has now a favourable opportunity to develop her export trade in manufactures, particularly the cotton piecegoods trade. During the war, India has expanded her manufacturing capacity in various directions and it should be possible for her to supply to her neighbours in particular various manufactured articles which Japan was supplying to those markets before the war.

The Mid-East countries should provide a good market for Indian piecegoods. The East African countries are now importing from India a wide range of commodities previously obtained from Japan; this should continue in the post-war period too. These territories constitute, in particular, a large market for Indian piecegoods, replacing Japan which was one of the largest sources of imports to them before the war.

The U.S.A., Australia and South America

There seem fairly good prospects for India to replace Japan in the Canadian market in respect of a large part of the pre-war imports of that market from Japan, both in manufactured and semi-manufactured goods.

India can replace Japan in Australia in respect of piecegoods. If modern methods of manufacture are adopted, she can hope to continue sending to that market in the post-war period what she has been able to do during the war, viz., art-ware, apparel, electric appliances, glassware, crockery, cutlery and hardware, toys, umbrellas, silk, buttons, paper and pasteboard and rubber manufactures.

Prospects of India replacing Japan in the South American markets too in regard to cotton piecegoods are considered to be fairly good.

Indian Parachutes Over Burma

How They Solved Supply Problem

It can now be revealed that India was a major source for the production and supply of parachutes which featured prominently in the Arakan and Burma campaigns.

The last nail into the Japs' Rangoon coffin was driven by men of the Indian Parachute Regiment. According to the latest available figures, India has produced for the Allied forces over 36,000 silk parachutes required for a surprise landing of this kind, about 4 million cotton parachutes and 400,000 hessian parachutes for dropping supplies.

The story goes back to 1941 when production of silk parachutes was first undertaken in a factory at Cawnpore. By the middle of 1942, a specially designed air-conditioned ordnance parachute factory was erected at Cawnpore. This factory was laid out to produce 1,000 parachutes' canopies per shift per month, the connected harness and packs being produced in the Harness and Saddlery Factory in the same city.

The special machinery required was ordered from America, but most of it was irretrievably damaged *en route* by enemy action. Fabrication was, therefore, carried on by improvised methods with such machines as were available in this country. Certain special machines have since been received from America.

Extensive use was made in the Burma Campaign of cotton parachutes for dropping supplies not only to troops but also to civilians. During the rainy season when the lines of communication were not intact vital supplies and equipment were parachuted by Allied planes. The flexibility conferred on forces supplied by air was one of the most potent factors in enabling the Commanders in the field to impose their will upon the Japanese, and so to defeat them at Myitkyina in the Arakan and at Imphal, to drive the Japanese from India and to press on into Burma. The figure for the total quantity of cotton parachutes produced in India for this purpose runs into 4 million.

Production of cotton parachutes started in India early in 1942 with a target figure of 2,000 per month. By June 1942 capacity for 5,000 per month had been established in existing Government Clothing Factories. To keep pace with increasing demands capacity continued to expand during 1942 and an outturn of 21,000 per month was given for the first nine months of 1943. In December 1943 over 40,000 were produced and plans were made for the complete conversion of two ordnance clothing factories into parachute factories, each to produce an outturn rising to 100,000 parachutes per month by September 1944. Approximately equal numbers of containers for use with these parachutes have also been produced in India.

India has also produced about 4 lakhs of hessian parachutes for supply dropping. These are relatively uneconomical in use but they performed a very useful function in an operational emergency early this year.

Russia Grows Natural Coloured Cotton

Vast Range of Hues and Shades—Light and Dark Blue, Green, Pink, etc.

(*Special to the "Indian Textile Journal*")

EVERYTHING from coloured cotton—shades of pink and green on the bolts—to a tremendous increase in production of new varieties of tougher cotton and new machinery for processing has been achieved or promised in the near future, according to reports from the cotton industry in Russia.

The All-Union Cotton Research Institute has been co-ordinating all experiments and has planned greater production, with particular emphasis upon the development of Central Asia.

At the same time the Cotton Goods Workers Union, in the process of reconversion to peace-time production, has been making use of the Stakhanovite movement to increase the volume and quality of cotton goods.

Mikhail Alexandrov, Director of the Research Institute, has reported that "selectionists" working on the development of woolly cotton and natural coloured cotton have produced "exceedingly interesting" results. One of these new varieties has a brown-coloured fibre.

At the Turkmenian Experimental Station he says, cotton is being developed in the following shades—light and dark blue, green, pink and smoke colour.

"The work on the green varieties is almost finished and apparently within the next few years we shall be able to cultivate cotton with a vast range of hues and shades."

Alexandrov adds that experiments indicate natural coloured cotton produces a greater length of better quality yarn to the mass of raw cotton.

"Laboratory experiments also show that the colour is very fast and tends to deepen rather than fade under the action of soap and even when washed in a weak solution of lye in hot water. The only exception is the brown fibre which tends to change colour under the influence of sunlight but industrial laboratories have developed methods of fixing the brown colour by processing it with copper and chromium salts."

In regard to the new varieties of cotton with a "coarse woolly fibre," he says it has been brought about by intra-species crossing and the crossing of different species. These varieties, including the coloured ones, are said to have excellent technical properties.

For instance, one cotton produces a woolly staple 37-40 millimetres in length, with a number between 5,500 and 6,000 and a breaking strength of 34-40 kilogram metres. Another has a woolly staple number of 4,500 and is 29-31 millimetres long.

Some of the brown cottons are also woolly. As a rule they have a 26-30 millimetre staple with a metric number varying between 3,900 and 4,500.

According to Alexandrov, when employed in industry cloths made from long-staple cotton crease and remain creased when slightly crumpled but those woven from the woolly cotton are much more resilient. Suitings and coatings made from woolly cottons are said to be of very high quality and possess high porosity. Brown woolly cottons are "commercially interesting" because there is economy in dying, in steam for processing the cloth, in electric power and labour power.

In addition to the development of new varieties of cotton, the Institute has speeded up production by introducing conveyor belts, roller transporter, and cranes into the mills. The Institute claims to have modernized the cotton gin, doubling its output, trebled the output of the linter and made its newly designed cotton cleaner twice as effective.

Experts are working on the cotton picker and the cotton cleaner so that the quality will be as high as that of cotton picked by hand.

Alexandrov also says that the Institute has undertaken the designing of typical cotton mills to be built in the post-war years. Projects include extensive use of electrically driven machinery, mechanization, production, organization and the improvement of many manufacturing processes.

The Stakhanovite movement in the cotton industry, according to Madezhda Berezkina, woman chairman of a regional committee of the workers' union, has increased the quality and volume of production through a sound knowledge of the technique of the individual's job.

This system seems to be nothing more nor less than a use of individual initiative. When the movement first started, some weavers operating automatic looms " modified their methods " until they were operating 144 machines instead of 16. The ace weaver, a woman chairman of a central committee, first operated 210 machines.

Berezkina says that the success of the movement can be explained partly by the high technical and educational level of the workers and partly by an increased improvement in their living and working conditions.

Controls Relaxed in America

Textile Industry Steps up Reconversion Plans

(*Special to the " Indian Textile Journal "*)

THE American textile industry, fighting under the handicap of delayed government action in deciding peace-time price levels, and mounting labour difficulties, stepped up the *tempo* of its reconversion plans during the month following the defeat of Japan.

Into discard went many of the war-time controls on production and distribution, clearing the road back to " free " markets, but the good effects in that direction were lessened by dilatory and confusing tactics on the price front.

Summarized, the industry's attitude was that the battle against inflation must be won, and price controls enforced until supply and demand can be brought into a practical balance. Yet cotton, wool and synthetic fabric producers were equally positive that price limitations must be liberal enough and flexible enough to meet the practical needs of the situation.

Criticism on pricing policies, spearheaded by top-flight industry leaders, crystallized on the agrument that until the producer knows what prices are to prevail on terminated military contracts, and resultant inventory accumulations, and just how much latitude will be allowed in meeting increased wage demands and other higher processing costs, the various branches will be unable to proceed fully on a peace-time basis.

Arthur Besse, President, National Association of Wool Manufacturers, one of the outspoken critics, declared the " wool industry's reconversion efforts were stymied by O.P.A. inertia." The delays, he declared, had seriously hampered the disposal of cancelled military orders, and would substantially increase materials which the Government will be obliged to take over, bringing new handling problems and the possibility of a monetary loss in reselling.

Besse, more particularly, cited the effect of delays on the automobile industry, a front runner in the nation's overall reconversion programme. He emphasized the industry's helplessness in meeting the demand for automobile upholstery fabrics, due to the lack of price ceilings, not announced until 10th September, but " in the works " since September 1944.

Mr. W. Ray Bell, President, the Association of Cotton Textile Merchants of New York, bemoaned the fact that most cotton textiles have been unpriced for more than two months. He charged that the Office of Price Administration, " like a big Buddha, squats on its responsibilities and delays the positive action necessary " while market confusion tends to delay reconversion and re-employment of cotton mill workers.

The Guaranty Trust Company, commenting on the price situation, declared " serious misgivings existed " not because price regulations had been temporarily retained, but " because the rules governing prices of manufactured goods are believed too rigid to give producers the incentive for quick reconversion and offer dealers sufficient inducement to promote their distribution."

Users of cotton yarns feared that without effective price relief, they could be squeezed between low fixed prices for their products on the one hand and high material and labour costs on the other, giving a big competitive advantage to synthetic fibres, and possibly to the new field of plastics.

Where O.P.A. did take action on prices, chiefly on a few minor cotton fabrics, the results were deemed inadequate and confusing. In some instances, prices actually were reduced. Where increases occurred, they were termed inadequate to meet higher production costs. In another case, where a manufacturer was granted an individual price increase on grey goods, it came with the proviso that if he finished the goods, he must reduce the adjusted ceiling by 4 per cent. before calculating the price of the finished merchandise. O.P.A. declared the action would bring down the finished fabric price by 5 per cent. in some instances.

Next to price uncertainties, the biggest obstacle to new production plans came through the shortage of skilled and semi-skilled labour. Employers everywhere reported that despite the larger overall increase in labour supplies, growing out of cutbacks in war industries and discharged war veterans, they experienced difficulty in attracting workers back to lower paying jobs after a taste of high wages in war plants.

Moreover, former mill workers seemed to have in mind the Utopia of getting paid without working. That idea germinated with current Congressional proposals. Under the Murray-Kilgore Bill, now before Congress, some 13,000,000 jobless workers, not now covered by the Social Security Act, would be paid $25 a week for 26 weeks during the transition period. With that possibility believed imminent, and fortified with cash accumulated at high war-time wages, workers seemed satisfied to bide their time and wait for developments.

Until the labour problem is solved, millowners declared it would be impossible to reach peak operations needed to fill civilian shortages for at least six months.

Best News of the Month

The best news of the month for cotton came in the War Production Board's decision to sweep aside many of the restrictions on production and distribution. Under a drastically revised order M-317-A, W.P.B. freed most of the 134 fabrics formerly under its control, after rated orders have been filled and provision made for export set-asides.

Simultaneously, W.P.B. discontinued its special programme designed to stimulate production of 15 items of men's and boys' work clothing "because military cutbacks have increased availability of drills and twills." The programme will end officially on 30th September, the Board ruled.

Enthusiasm generated by first news of the relaxed M-317-A controls cooled later with the realization that a reinstatement of some previously cancelled Government contracts, and outstanding rated orders for an estimated 120,000,000 yards of print cloth constructions alone, obviously would limit the supply flowing into the civilian pipe-line for the immediate future.

In the export field, cheering news came in the form of an allocation of 6,000,000 yards of cotton textiles to the Philippine Islands, announced by the Foreign Economic Administration. Particularly encouraging was the stipulation that the business was to be handled by commercial exporters, marking the first private business since Pearl Harbour. Textile exporters hailed the shipment as an "encouraging start" toward restoring the demand for American-made textiles in the Islands. With Japanese competition eliminated, textile producers predicted that the islands will become one of our leading markets.

In wool goods, observers, looking beyond the present muddled price situation, foresaw a period of post-war prosperity unmatched in recent years. Predictions for an average annual production of almost 500,000,000 yards, compared with the 1939 figure of 368,000,000 yards, was based on two considerations. (1) The fact that the public lost interest in foreign fabrics during the war with the discovery of the high quality of American-made fabrics, and (2) the presumed inability of British and French producers, the previous leading competitors, to achieve full-scale production for several years.

Similarly, in rayons, the elimination of Germany and Japan as big producers,

(Continued on page 871)

Egyptian Cotton Prospects

(From Our Special Correspondent)

THE new cotton season which officially opened in Egypt on 1st September finds the market in the same confused state which has been apparent for some time. The recent decision of the Government to increase prices of the new crop by 10 per cent., has failed to produce the bullish tendency hoped for by short-sighted and hand-to-mouth operators.

One of Egypt's leading exporters, Mohamed Farghaly Pasha, in a statement to the Press, described this as an unusual and unnatural trend. He added that in spite of the rise which was expected after the Government increase, average prices had not changed much. Farghaly Pasha attributed this to controls which fetter the export trade, complaining that it was impossible to deal directly with the English spinners, a condition which also applies to India.

Other optimists thought that the mere announcement indicating the imminent end of the British Cotton Co-ordinating Commission's activities, would prime the sluggish market. The star-gazers, who are always on the look out for a plausible reason to justify the much heralded but unmaterializing upswerve of prices, also think that they have found a new source of justified inspiration in the circumstances arising from the abolition of Lend-Lease.

None of these hopes have so far been fulfilled. As far as Egyptian cotton is concerned the explanation is mainly to be found (1) in the persisting absence of sufficient shipping space permitting large-scale exports, (2) the continuation of controls by Egypt's main customer, Britain, and (3) the excessive stocks of long staples resulting from the tendency to concentrate on large-scale growing of Karnak. On paper the statistical position of Egyptian cotton is far from unfavourable. The old season closes with a total exportation of around 4½ million kantars, which is almost equal to the year's crop. Local mills having consumed over 1 million kantars, last year's carry-over has consequently been decreased by this amount.

There is some controversy as to what the actual carry-over at the end of the season amounted to owing to the divergent methods of establishing statistics compiled on the one hand by Government sources and on the other by private bureaus. Thus competent private statisticians state that the Government bring the same quantities into account several times under such different headings as stock held by banks, by merchants, by buying agencies and by mills. Reliable sources, however, estimate the carry-over at 6 million kantars though official figures are likely to be higher.

Expert estimates put the new crop at from ¼ to ½ million kantars above last year's and the total will just hit the 5-million mark. This is still a long way off the average pre-war crop which gravitated around 10 million kantars.

The bare figures, therefore, should give cause for satisfaction, and providing there are no major hitches or unforeseen world complications, Egypt should be able to dispose of its stock fairly smoothly. Some increase of price is even to be anticipated though nowhere in the measure hoped for by a considerable portion of the market, which believes that the removal from the Egyptian scene of the Cotton Co-ordinating Commission will lift the last impediments to higher prices.

There is no doubt that the majority of growers and exporters want an open market unfettered by restrictions or controls. They dope themselves with the illusion that once the C.C.C. has ceased to function in Egypt, the demand here will be such that the law of supply and demand must inevitably lead to much higher price levels. Most of them still think in terms of pre-war or last-war economy. They forget that with or without the C.C.C., British spinners are subjected to controls and will remain so for a considerable length of time. Moreover, British industry is doing all it can to avoid inflation. Consequently, the collective buying and bargaining power of Egypt's predominant cotton consumer will be able to curb any unreasonable price increase at the source.

It is also too readily believed here that once the C.C.C. ceases to function, Continental mills are going to pay high prices owing to the famished state of Europe's stock of raw material and its urgent need for textiles. Operators will just not believe or understand, that Continental countries are also living under the sign of controlled economy and will continue to do so for many years. The example of France should be most enlightening. The first 100,000 bales bought here by this country were at prices which were even slightly below the Egyptian Government fixed levels. There is no reason to believe that, hard pressed as she is in her economic reconstruction, France will be willing to pay more than is reasonable for the next 120,000 bales for which she will shortly be in the market. Nor can it be expected that ruined countries like Czecho-Slovakia, Italy, Hungary or Poland, to mention but a few outstanding pre-war buyers of Egyptian cotton, will be either in a position or willing to pay a fraction of a cent more than they can help.

To bolster their dreams of unrestricted trade-cum-high price, exporters point to Spain and Switzerland as possible hard-currency and good price clients. But even if these buyers are ready to import immediately large quantities to fill their depleted stocks, they could at no time solve Egypt's cotton problems.

Of these, the most pressing one is that of the large accumulation of Karnak long staple, whose higher price has been a powerful incentive to growers. This new variety has been developed considerably during the war. However, very few, if any, of the continental spinners know it. Their equipment is not adapted to this staple and the adjustment of the spindles would necessitate a mill stoppage of at least a month. The same is true of England where Karnak technically has been well received but where the loss of so many man-power-hours cannot be afforded. The United States has taken quickly to Karnak and of the 22,000 bales shipped on consignment all have been absorbed to date.

Nevertheless, European spinners must make adjustments when they can least afford to lose time and no doubt it will take more than one season before the present carry-over of close on 2 million kantars can be absorbed. The new crop will be around 3 million kantars so that the total quantity on hand during the coming year will not be below 5 million kantars.

When the new crop begins to come in, the Egyptian Government may find that it has far more Karnak on its hands than it would like to have. If anything like an easier situation is to be created soon, the Ministry of Agriculture will have to take determined and drastic steps to carry out its intention of limiting the Karnak acreage.

The most striking feature of these last days is the increased interest for short-staple Uppers such as Achmounis and Zagoras. The cancellation of Lend-Lease has given rise to a not unreasonable expectation that Britain will want to buy as much short and medium staples as she can get within the sterling area so as to offset her deficit in American purchases. Egyptian Uppers should, therefore, be much in demand by British spinners. Experienced observers anticipate that the price margin between Egyptian long and short staples will gradually shrink. Moreover, the limited production of Uppers and the fact that the ever developing Egyptian cotton industry consumes yearly over 1,000,000 kantars of Achmounis and Zagoras, will rapidly absorb the carry-over of these varieties. As soon as new equipment reaches this country, local industry should easily be able to double its consumption of Uppers.

Everything, therefore, points to a justifiable boom in short and mediums within a not too distant future.

As a well-known and shrewd operator told me this morning: " If my wife would let me, I'd sell all her jewellery to buy Uppers."

The first week of the new cotton season finds the Egyptian market no more cheerful than previously. Daily transactions are practically *nil* and there is very little oversea demand.

It is expected, however, that there will be some return to activity as soon as the first arrivals of the new crop begin to come in. These first deliveries are always much favoured on account of their quality.

So far, the prospects for the new crop remain favourable and the high August temperature has been beneficial. Providing the boll-weevil and other parasites do not cause too much damage during the critical period which opens now, it is reliably expected that the new crop may be as high as 5 million Kantars.

Definite figures of the 1944 exports are now available. The total reaches 566,247 bales. Up to 31st July, Britain headed the list with 244,773 bales, India being a good second with 144,603. The other destinations are as follows:—

	Bales
France	83,798
United States	23,393
Lebanon and Syria	8,498
Belgium	7,202
Australia	5,763
Portugal	5,530
Spain	4,550
Palestine and others	2,011

As compared to 1943, exports to Britain have increased by 34,670 bales, whilst France and Belgium are new-comers since their liberation. Shipments to India have slightly decreased by 2,414 bales. The most notable drop is to the United States with a deficit of 23,219 bales, almost exactly 50 per cent.

Negotiations for purchases between the Egyptian Government and Continental countries, mainly Switzerland, Spain and Sweden, are still in course but the stumbling-block seems to be the shortage of shipping space. Nevertheless, official circles are confident of an early favourable solution.

Controls Relaxed in America

(*Concluded from page* 869)

it was felt, opens wider fields for the American industry. Authoritative quarters estimated that domestic production of yarns and fibre this year will rise to 900,000,000 pounds compared with 633,000,000 pounds in 1942, while output of woven fabrics in 1946 may rise to 1,900,000,000 yards, to put the nation in first place among world producers compared with a 1939 status of third place.

For the immediate future, however, civilians will not get the hoped-for increase in supplies of hosiery, underwear, dresses and other apparel items. Producers, pointing out that the yarn situation would continue tight for a while yet, explained that cancellations of Army contracts did not mean an immediate increase in "free" yarn. First processing practices must be switched over to standard tenacity yarns in the deniers most suitable for civilian goods, and numerous technical changes made in machinery.

In burlap, discussions proceeded on the question of whether the Government will extend its purchasing programme into the first quarter of next year, or turn it back to private hands. The issue was expected to be decided by 1st October. Trade opinion on the question is about evenly divided. Favouring the side of continued government control were reports of a tight market in Calcutta and relatively low price ceilings here, a factor which might induce Indian producers to seek outlets willing to pay higher prices.

Fibres Competitive with Cotton

A STUDY made recently by the Association of Cotton Textile Merchants of New York gives a detailed analysis of the potential inroads on the use of cotton textiles by various competitive fibres.

The items, arranged according to apparel, household and industrial uses, are shown in the accompanying table.

The total cotton consumed by these 30 uses in 1939 was 5,745,000 bales, or 78 per cent. of the total year's consumption of 7,369,000 bales. Of this figure, items facing negligible competition amount to 1,260,000 bales or 21.9 per cent., moderate competition 843,000 bales or 14.7 per cent. and considerable competition 3,642,000 bales or 63.4 per cent.

Use	1939 cotton consumed in bales	Competition	
		Degree	Source
TEN LEADING APPAREL USES			
Shirts	464,000	Moderate	Rayons, especially sportswear
Piecegoods	332,000	Considerable	Rayons, synthetics
Trousers	285,000	Considerable	Rayons, blends
Men's overalls	232,000	Negligible	
Men's underwear	210,000	Moderate	Rayons
Women's dresses	175,000	Considerable	Rayons, synthetics
Women's underwear	104,000	Considerable	Rayons, synthetics
Men's hosiery	98,000	Considerable	Rayons, wools
Men's nightwear	75,000	Moderate	Rayons
Men's work gloves	62,000	Negligible	
Total	2,037,000		
TEN LEADING HOUSEHOLD USES			
Sheets	433,000	Negligible	
Towels	303,000	Considerable	Paper
Blankets	180,000	Considerable	Wool, rayon, blends
Drapery, upholstery	154,000	Considerable	Synthetics, glass fibre and jute
Rugs, carpets	149,000	Considerable	Flax, jute, paper, others
Curtains	130,000	Considerable	Rayons, synthetics
Bedspreads	94,000	Moderate	Rayons
Pillowcases	75,000	Negligible	
Bed tickings	73,000	Negligible	
Oil cloths	63,000	Negligible	
Total	1,654,000		
TEN LEADING INDUSTRIAL USES			
Automobiles	707,000	Considerable	High tenacity rayon, synthetics
Bags	473,000	Considerable	Burlap, paper
Cordage, twine	248,000	Considerable	Jute, hemp, sisal, synthetics
Laundry	131,000	Negligible	
Shoes	128,000	Negligible	
Thread	120,000	Considerable	Flax, silk, synthetics
Electric insulation	83,000	Considerable	Glass fibre, silk
Artificial leather	63,000	Negligible	
Belts (machinery)	61,000	Considerable	Leather
Hose	40,000	Considerable	Flax
Total	2,054,000		
Grand Total	5,745,000		
	1,260,000	Negligible	
	843,000	Moderate	
	3,642,000	Considerable	
	5,745,000	Grand Total Above	

(*Rayon Organon*)

Progress of Social Insurance in India During the War Period

By A. N. AGARWALA, M.A., *University of Allahabad*

(*Specially Contributed*)

ONE of the benefits of the Second World War to this country has been the great progress, great in comparison to what had been done in the past, made in regard to the introduction of social insurance in India. Quite contrary to the developments in other parts of the globe before the outbreak of the recent hostilities which have now come to a close, India made absolutely no progress in this direction. Social insurance, as is well known, originated in Germany and made great progress as a result of the 1883-89 German legislation associated with the name of Bismarck. Other countries, suffering from the excesses of the Industrial Revolution, began to copy Germany in varying degrees and in an independent and separate manner. An important stage of development was ushered in when the International Labour Office was instituted after the First World War and set about the task of making Conventions and Recommendations which became international norms in matters relating, *inter alia*, to social insurance, and represented the experience and wisdom of the various countries of the world in this regard. It is now commonly accepted that much of the credit of the social insurance progress made in the world during the inter-war period belongs to the International Labour Office which is the only international body to survive the Second World War, a distinction it has so well merited. The above-mentioned Conventions were ratified by many countries and many of those countries which did not ratify them closely followed them. The next stage in the path of progress was marked by the passage of the New Zealand Social Security Act in 1938, exactly one year before the Second World War. This Act which covered the entire population and provided protection against the entire range of social risks would have become an inspiring model for the world to follow but for the intervention of the recent war. The history of social insurance in the world clearly shows what a remarkable progress was made in the period lying between the two world wars.

In India unfortunately this was not the case. So far as the Government of India were concerned, they did not at any time even think in terms of social insurance. The International Labour Conventions relating to social insurance were neither ratified by them nor even approximated. It is true that a whole string of Labour Commissions and Committees appointed during the inter-war period touched upon social insurance matters, but their treatment suffered from two shortcomings. Firstly, they did not consider the problem of social insurance as a whole but merely of certain branches, viz., health insurance, unemployment insurance, provident fund and retirement pension. No committee considered all these problems in any thoroughness and none went beyond these four. Secondly, they considered these problems along with numerous other weighty issues and they could not be expected to do anything more than make passing references. In other words, behind their observations and recommendations in these directions does not lie any deep study and specialized knowledge which could give to their views on these matters any finality. Even these recommendations, for what they were worth, were not given any attention by the Government. Economists, who could be expected on account of their academic and theoretical leanings, to have made a special study of the problem of social insurance with special reference to this country, also remained inert and dormant and kept themselves busy with other more practical and practicable problems. Social insurance was no more than an idle diversion for those who loved to roam about in uncourted fields at their leisure; and the consequence is that not a single book dealing with this issue in all its bearings and with adequate thoroughness was produced during this long period. It would not be an erroneous statement to say that the omnibus phrase of "Social Insurance" was almost foreign to Indian economic literature; at least, the term was not seriously used.

Workmen's Compensation and Maternity Benefit

One may, however, say that the Government in this country did introduce two social insurance measures, viz., Workmen's Compensation Act and Maternity Benefit Acts, the former of which is an all-India legislation and the latter of which has been passed by several industrially important Provinces. Indeed, this statement has long percolated in the labour literature of our country and even some of the biggest writers have made it, and it is in frequent use even to-day. But, really speaking, these measures do not come up to the level of social insurance. According to these Acts, the employer has to pay cash benefits or compensation to the workers during the periods of employment injury or pregnancy out of his own pocket. The liability of making these payments rests on the employers and on them alone, an arrangement which is vastly different from social insurance. The establishment of a common monetary fund arising out of tripartite contributions (from the workers, employers and the State) from which all the benefits are dispensed, is the central feature of social insurance; and this is lacking in both these legislative measures. It is, therefore, completely wrong to imagine that these are social insurance measures. On the contrary, they are very incomplete, inadequate and primitive systems from a social insurance angle. Their fundamental defect indeed is the fact that the benefits are to be paid entirely by the employers, an idea which was opposed by Bismarck at the time when this feature was first being introduced in the world but which was nevertheless introduced because of the great influence of the French jurists of the time. Sir William Beveridge, in his celebrated report, has definitely reverted to Bismarck's idea and has recommended that the financial burden of these risks should be shared out in the usual tripartite manner. It is the absence of this feature which is the root cause of most of the weaknesses of these measures. All the complaints regarding the alleged attempts on the part of employers to evade their liabilities in this regard will become a matter of the past if the social insurance principle is applied to the above-stated schemes. It should thus be clear that it is a fundamental error to say that the Workmen's Compensation Act and Maternity Benefit Act are social insurance measures.

From the above brief survey it should be clear that during the inter-war period, while the other progressive countries of the world were marching steadily on the road of social insurance, our country was not alive to the problem even in an academic or theoretical sense. Our backwardness in this regard was complete. But then came the war. The commencement of hostilities had a two-sided effect on the progress of social insurance in the world. On one side, the finances and resources of the nations were diverted to prosecute the bloody war and hardly anything was left to finance additional social insurance projects which are very costly in their nature. In the practical sphere, therefore, social insurance progress came to a dead stop. In democratic countries the programmes that had been introduced thus far were retained as they were, but in fascist countries, particularly in Germany, the benefits were curtailed in several direct and indirect ways. But, on the other side, it was realized that in order to make the various sections of the population, combatant and non-combatant, yield their best and maximum to the successful conclusion of the hostilities, it was necessary that they must be promised a better post-war world. And in this, social insurance was regarded as a very important factor. Social insurance thus became a very important part of economic planning, so much so that whereas economic plans are not yet complete in several countries, social security plans have already been finalised. The Beveridge Plan in Britain, the Wagner-Murray-Dingell Bill in the United States of America, the March Plan in Canada and the Social Security Plan in South Africa have already been published and discussed and now that the war is over steps will be taken to implement them partly or wholly or in a modified form. In the theoretical sense, therefore, vast preparations have been made for making unprecedented progress in the field of social insurance which has now been included in the newer and wider term, Social Security.

Progress Made in India

Let us consider the progress made by our country during this period parallel to this record. Up to the year 1942 absolutely nothing was done here in this regard except some discussions relating to health insurance held at the various Labour Ministerial Conferences. But in that year was published the famous Beveridge Report which attracted the attention of all the progressive countries of the world and even of such backward countries as India. The rapid pace at which the world thought was moving inspired our Government as well and they appointed, early in March 1943, Professor B. P. Adarkar of the Allahabad University, a special officer to draw up a Health Insurance Scheme for the industrial workers of this country. Professor Adarkar put in over a year of assiduous labour and published a valuable report which he submitted on 15th August 1944. The publication of the Adarkar Plan of Health Insurance may be taken as the starting point of social insurance in this country.

The Adarkar Plan

The Adarkar Plan is a valuable document which has evoked unreserved praises from international experts on the problems. Professor Adarkar was asked to draw up the scheme to cover only textile, engineering and mineral and metal industries and recommended that all perennial factories, except those specially excepted, should be covered. The upper income limit fixed by him is Rs. 200 per month and the upper age limit is 60. The period of contributions should be one month and the employer should be the agency for collections. The insured persons should be divided into three classes, viz., Class A earning more than Re. 1, Class B earning As. 8 to Re. 1, and Class C earning less than As. 8 per day. The employers should pay contributions at the flat rate of Re. 1 per worker whereas the workers' contribution is to be As. 12, As. 8 and As. 4, according as they belong to Class A, B or C respectively. The qualifying period should be six monthly contributions and a waiting period for cash benefit of three days. Medical benefit should be given without any conditions. The cash benefit should be As. 6, As. 4 and As. 2 for A, B and C class till the payment of the 24th contribution, after which the cash benefit should be As. 12, As. 8 and As. 4 respectively. The whole scheme is to work according to the budgetary method. The Government should give a guarantee of the budgetary equilibrium by giving loans to cover deficits. There should be a Central Board of Health Insurance to administer the health insurance scheme, with advisory Regional Boards and Local Committees under it. Cash benefit and medical benefit should be unified and there should be a salaried medical service. Arrangements should also be made for preventive activities and post-medical rehabilitation. Prof. Adarkar expressed himself in favour of State contribution and recommended that if the State agrees to contribute, the Central Government should pay As. 2 per worker and the Provincial Governments, As. 6 per worker. Correspondingly, the contribution of employers should be reduced by As. 6 and of workers by As. 2.

Rao-Stack Report

The proposals of Professor Adarkar in this regard were submitted for examination to the two I.L.O. experts, Messrs. Stack and Rao, who were specially invited by the Government of India for the purpose. These experts went round the industrial centres of this country with a view to obtain firsthand information regarding the conditions prevailing there as far as possible in the short time at their disposal, and in the light of their knowledge, experience and this information, considered the Adarkar Report. They paid a glowing tribute to the author of the report and agreed in substance with the proposals contained in it. Professor Adarkar had recommended that employment injuries and maternity should be insured along with sickness; the two experts welcomed this recommendation and they modified the Adarkar Plan with a view to give effect to this recommendation. They differed from Professor Adarkar in unifying cash benefit with medical benefit in a health insurance scheme and opined that medical benefit should be given separately under a national system of medical treatment which is expected to be set up in this country after a short time, a suggestion which must not be accepted as final in view of the special circumstances obtaining in this country. The integral scheme suggested by them has the following important features: (i) the inclusion of non-manual workers on the same terms as manual workers, without regard to income; (ii) the grouping together of those branches of insurance which require a medical service: sickness, maternity and employment injury; (iii) the determination of an inclusive contribution in respect of all the risks covered by the scheme, the contribution being shared between employer and worker, and the employer's share being the larger the lower the wage of the worker; (iv) the provision of a grant from taxation; (v) the treatment of the family as a unit for the purpose of health insurance; (vi) the grant of cash benefits sufficient for subsistence in all cases and proportioned to the normal standard of living of workers of the lower and middle grades; and (vii) the simplification of rules and administration for the sake of easy intelligibility and economy.

The Government of India have thus brought the Health Insurance Plan to a sufficiently advanced stage. Simultaneously, however, they have also taken steps to frame for this country a full-fledged social security scheme. The Tripartite Labour Conference, at its third meeting in September 1943, unanimously passed a resolution recommending the setting up of machinery to investigate questions of wages and earnings, employment and housing and social conditions generally on the basis of which a social security scheme for labour could be prepared; and the appointment of a committee to frame such a scheme after all this material has been collected. In accordance with this resolution, the Government of India appointed in 1944 a Labour Investigation Committee to do the spade-work and collect the basic material for the framing of a social security plan. This Committee was appointed on 12th February 1944 and has been working by now for over a year and a half. It has been making extensive and thorough inquiries in the various aspects of labour problems and there is no doubt that its report, which is expected to be out by the end of this year, will be very exhaustive and useful. It will, indeed, be of considerable interest to the students of Indian labour and social security.

That the Government of India are anxious to go ahead with their programme is clear from the fact that while the deliberations of the Labour Investigation Committee are not yet over, they have invited Sir William Beveridge, of Beveridge Report fame, to come to this country and prepare a Beveridge Plan for India. There is no doubt that for preparing a social security plan for this country, the choice could not be better made. Sir William is an expert of authoritative standing and is greatly sympathetic to the social security aspirations of this country. But we would like him to be assisted by a strong body of Indian experts who could acquaint him at every step with the labour conditions as obtaining in this country, for it must be remembered that in our country the industrial and labour conditions present many peculiar aspects not to be found in the West.

There can thus be a reasonable certainty that in a not-too-distant future we will have a full-fledged and complete social security plan for this country. This will be a very great achievement. But it will be an achievement in the theoretical or academic sphere only. The problem of putting the scheme into actual practice, which is the most difficult problem, will still remain. The future prospects of a social security plan for this country will depend upon the ability and willingness of our Government to implement the scheme that is ultimately prepared. We may leave the ticklish question of their willingness but their ability to give a practical shape to social security in this country will be conditioned by the financial resources of the State and by the extent to which contribution-burden can be placed upon the industries covered. Both these matters impinge ultimately upon economic planning or even economic progress in a manner which does not amount to planning. Unless the country is placed on the path of economic prosperity, it is extremely doubtful if adequate finances can be found for giving to the social security scheme a practical shape. But things are happening which need not make us very pessimistic in this regard.

Government's Labour Department

New Machinery

THREE Regional Labour Commissioners, Mr. D. G. Jadhav, Dr. Sheth and Mr. Abu Talib, have been appointed by the Central Government at Bombay, Calcutta and Lahore for administering their new machinery which has been set up to deal with industrial relations in industries and undertakings in the "Central sphere." The organization is under Mr. S. C. Joshi, the Central Government's Chief Labour Commissioner at headquarters.

The new set-up also includes a Deputy Labour Commissioner at New Delhi, 9 Conciliation Officers and 24 Labour Inspectors (Central), located at various centres throughout India, and one Central Inspector of Industrial Canteens. Industries falling in the "Central sphere" are (1) all industrial establishments owned or controlled by the Government of India; (2) federal railways; (3) mines and oilfields; and (4) major ports.

The Chief Labour Commissioner and his officers will be in charge of conciliation, welfare and operation of certain labour laws in these industries. Their functions include assistance in the formation and maintenance of voluntary machinery in industrial establishments, prevention and settlement of trade disputes and maintenance of information regarding wage rates and conditions of work. They will also examine welfare measures and will give advice to employers and Government on these measures.

As the Chief Labour Commissioner's organization will be responsible for conciliation in all federal railways, the existing machinery under the Conciliation Office (Railways) and Supervisor of Railway Labour ceases to have separate existence. The officers under the Chief Labour Commissioner are being invested with statutory powers of conciliation under the Trade Disputes Act, 1929. They are also being empowered as Supervisors of Railway Labour and as Inspectors under the Acts relating to payment of wages and employment of children in federal railways and major ports. The Assistant Labour Welfare Advisers appointed by the Central Government at various provincial centres will be redesignated as Conciliation Officers and will work under the Regional Labour Commissioners.

Dearness Grant to Continue in Ahmedabad

THE members of the Textile Labour Association, Ahmedabad, will get dearness allowance for another year, that for the month of August 1945 being Rs. 43-4-4, according to an award of the Industrial Court, Bombay, composed of Mr. Justice Divatia, President, Mr. Justice Rajadhyaksha and Mr. D. V. Vyas, in the dispute between the Labour Association and the Ahmedabad Millowners' Association.

The scale of the dearness allowance, according to the award, rose by Rs. 4 for every 11 points in the cost of living index, over the datum index number of 73 for the month of August 1939. The index number for June 1945 was 192. The allowance would be paid for a period of one year from 8th August 1945, and would further vary according to the rise or fall of the index number for Ahmedabad. At the end of the year either party will be at liberty to approach the court for the continuance or revision of the scale.

Those drawing more than Rs. 75 a month will not be entitled to the dearness allowance. This scale neutralizes the rise in the cost of living to the extent of nearly 76 per cent.

After the termination of the war in Europe the dearness allowance was discontinued by the Millowners' Association, as per the agreement entered into with the Textile Labour Association. But one of the clauses of the agreement stated that either party could go to the Industrial Court over the question of continuing payment of the dearness allowance for three months after the termination of the war in Europe. The Court ordered in June 1945, that the dearness allowance should be continued for three months, on the old scale. This period expired on 8th August 1945.

The Industrial Worker in India—5

Education; Arts and Crafts

BY LALITA KUMARAPPA, B.SC. (*Cornell University, U.S.A.*)

(*Specially Contributed*)

IN the foregoing instalments of my article, I wrote about some of the benefits the modern industrial worker is receiving from his employer. Among them are medical aid, recreational facilities, better housing and sanitation, and proper care for children of parents who work in mills and factories. I shall now deal with the educational aspect of this welfare work. It is a most important one, because education is linked up very closely with the progress and culture of a nation. Though India has a culture which extends back into the dim and distant past, it is of a different sort. To meet the demands of modern industrial life we need an education which is very practical and highly technical. The leaps and bounds that technological science has made within the past few decades has completely revolutionized even our way of thinking and living. Twentieth century transport is unbelievably rapid, so the face of the earth has shrunk and distance is no bar to cultural interchange and the exchange of knowledge. Elaborate and numerous machineries for the production of a million different sorts of goods have raised our standard of living. We find that our men of genius have effectively harnessed science to the chariot of industry in a manner undreamed of in days gone by. But all these radical changes have been possible only because of education.

In the West, we find that technical skill and increased output depends, to a large extent, upon the intellectual training of the employees in a plant. The better schooling and the better technical training they have undergone determine the quality and quantity of work they can do. They understand exactly what is expected of them, and meet the problems which face them with ease and confidence. Here in India, many of our mill and factory hands are badly handicapped for want of education and technical training in their particular line, though they may have native intelligence. Actually, it is surprising how well many of these people get on considering the few advantages they have! With the same opportunities which Occidental workers get, our men and women would do equally well, if not better.

In America, education as such, formal and direct, has long had a place in the scheme of things among far-sighted and progressive employers engaged in various industrial enterprises. Research, and collecting data from several plants have shown that it is due to the experimental work carried on inside factories that much of the stimulus applied to continuation school work, and to adult education owes its strength. We too are just beginning to realize that the skill of systematically trained workers is superior to that of apprentices whose training is haphazard and based upon instruction on the job in hand, and the intelligence of the journeyman. Hence, the development of technical classes and schools in connection with individual factories, the financial burden being borne by the employers.

Abroad, but especially in the United States, many technological institutes offer what are known as *Extension Courses* which are held in the evening after the factories close, while still other courses are organized by the various industries themselves, and are given on the premises itself. These are open to men and women who wish to study up more on their special jobs and in their general field of work, so that they are thus eligible for promotion with an increase in salary. These courses are an incentive for the industrial worker to raise his financial status instead of always remaining in the same rut—mentally, socially, and economically.

Then too there are "*Continuation Classes*" for youngsters who do not come under the Child Labour Act. This arrangement enables boys and girls who work part-time in industrial plants to go to school and study for the rest of the day, and thus fit themselves for better and more remunerative jobs in later life. Progressive

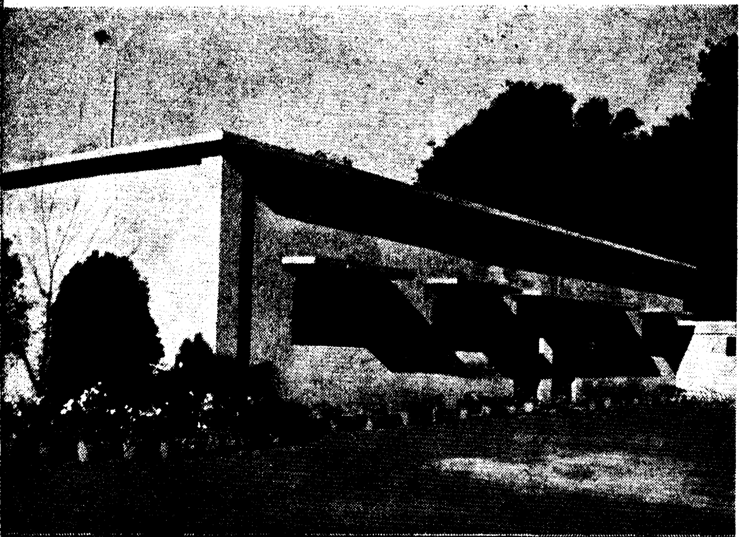
Continuation class for youth. They work part-time in the mills and attend classes during the rest of the day. Thus they not only get education but also help to eke out the family income by becoming wage-earners, when they are quite young.

American business magnates feel that "education should not be allowed to end with the entry of boys and girls into industry. Firms which interest themselves in the continued education of their young employees are convinced that, besides fulfilling a social obligation in this respect, they are building up a valuable asset for the future by encouraging young workers to find expression for more varied capacities than can be given immediate scope in work." Here in India, I think that it is especially important to see that young workers should be kept under a firm but kindly supervision by the welfare and personnel department of each mill or factory. It is during the adolescent stage that the future man or woman develops, so it is essential, nay vital, to see that each growing youngster is moulded gently into the type of adult that our country might be proud of. It is worthwhile to divert their natural aptitudes and talents into worthwhile and useful channels instead of permitting them to become slovenly, loose, and undesirable characters by a lack of supervision, and a lack of adequate educational, vocational, and play facilities. These young employees will also, most probably, need advice and guidance with regard to continued education or technical training, and direction in finding congenial leisure-time occupation that is interesting, useful, and also remunerative, if the latter is desired.

Some years back a common belief prevalent among all employers of industrial workers was that "Might was Right." The employees were not considered as human beings with the power to feel joy, pain, misery, and unhappiness, but merely as cogs in a vast machine, and thus of no account. The more one got out of them and the less attention one paid them, the better. But very gradually this sentiment has given way to one in which businessmen find that "*it pays*" to look after the well-being of their workers who are also humans like the people who employ them. Though the motive which prompted this new change of heart—seen in the concrete benefits being conferred on industrial workers of to-day—is not entirely an unselfish one, yet it is praiseworthy in that creditable and concrete results have been achieved.

One of the evils of our present system of specialised labour is a tendency to ignore the individuality of each employee. This is due to the fact that the sudden possibility of the large-scale production by machinery of things which had hitherto been produced, laboriously and slowly by hand, led to the almost complete disregard of the personal needs and rights of those who had to work the machines. Nevertheless, an encouraging beginning has been made which is doing much good for the general welfare and happiness of these employees through the uplift work which has now been established in several of our more progressive mills and factories. Here, I must stress that it falls to the lot of the Welfare Officer, in his unique position in the industrial world, who is especially fitted to make use of the limitless opportunities to develop the personality and powers of each worker and help him to find a proper niche for himself.

Many of our up-to-date industrial plants are following the plans used abroad for the education of their employees. Continuation classes are held for children; evening classes for adults in vocational training for improving their technical skill, as well as lessons in building up habits of thrift



LEFT :

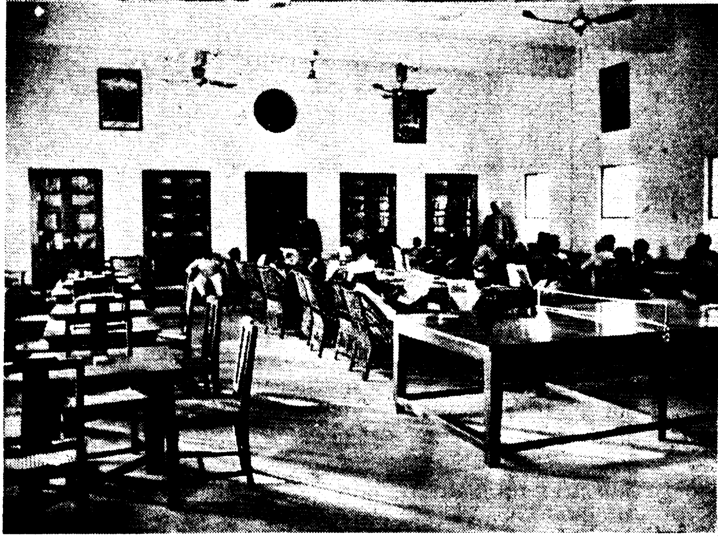
(*Top*) Even the youngsters of mill workers are provided with an office for carrying on their club and other activities.

(*Centre*) The Elgin Mills of Cawnpore have started a school for the children of their employees. Here we see the proud parents with their children standing in front of the school building.

(*Bottom*) The Buckingham and Carnatic Mills of Madras have started this lending library. It lends books out to workers to read at home. The men find much useful information too in their various fields of work, and one of them is busily making notes on something interesting which he has read.

and saving, and keeping up with world affairs.

To conclude this section without mentioning the need for a library in every industrial plant will be negligence on my part. No matter whether the library is small or large, there should be one. If it is merely a nucleus, it can always expand as the demand for using it grows, and thus will justify the expenditure of acquiring new books, adding new sections, etc. There ought to be books on general interest topics; technical subjects dealing with the particular industry the plant is concerned with; books for women on child care and others on household problems, food, and so forth; books for children of different ages—attractively got up and gaily illustrated. There should also be magazines, periodicals, and papers in all the major vernaculars so that the



RIGHT :

(*Top*) Some of the mills provide even assemlfly halls for workers to meet and discuss their problems, hold lectures and stage entertainments.

(*Centre*) Education in thrift. Statistics show that a very large percentage of the workers are indebted. Some of the progressive mills are, therefore, helping their employees to save by starting these co-operative banking societies. In this manner the workers are also kept out of the clutches of the moneylender.

(*Bottom*) Education — Elgin Mills maintains this extremely well equipped, cool and pleasant reading room for workers. There are many papers and periodicals in the vernaculars as well as books. As the photo shows, many employees are making use of this facility in order to keep up with world news and broaden their knowledge.

employees can keep up with the times on current and world affairs.

The library has not only an important function to perform as an educational institution, and a means whereby knowledge and culture are imparted, but is also a place where one can go to improve one's industrial efficiency. In view of all the considerations presented above, the author of this article hopes that the education of the factory worker will become an essential function of every Indian industry in the post-war period!

Arts and Crafts

The arts and crafts taught to the workers as hobbies are delightful to busy oneself with in one's leisure hours; they are useful and remunerative. This last factor is probably the most powerful in keeping up the attendance at handwork classes, for, when the work is sold, it forms an additional source of income to the family, whose low wages are all too inadequate for the bare necessities of life. Handcrafts and arts are taught to children, as well as to grown-up men and women who find them to be a form of recreation besides being a means to occupy free time in a useful, pleasing, and profitable manner. Learning these various crafts gives the workers skill in things other than their own routine jobs in mills and factories. Many of the arts require a certain amount of creative designing, planning, and execution before the article can be satisfactorily completed. Thus, the employers have to use their brains as well as hands in carrying out their projects, and this keeps them from getting stale, and dull. Their interest and enthusiasm are kept alive and active instead of slowly dying for want of a suitable outlet, as against the mechanical and monotonous nature of their work in the factory. And in many cases, one finds real talent among the employees, which needs encouragement and a chance to develop and blossom, and it is in these factory workshops where such discoveries are very often made. By carefully watching the children at work, the teacher can find out the true leanings and natural aptitudes of a child—whether he likes carpentry, weaving, painting, or anything else, and thus the foundations can be laid for a suitable vocation in later life, so that as an adult worker he will be happy and contented with his job, instead of feeling dissatisfied, bored or unhappy with his lot.

Among the handcrafts taught in industrial concerns in India to the children of their employees we find basket-making, mat-weaving, making paper flowers, pottery-making, and carpentry. In the case of expensive materials a small fee is charged for maintaining the supply of goods, equipment, etc., while in others none at all. But as the children are permitted to sell their finished articles, this fee is covered, and a profit made into the bargain, which they are allowed to keep. Money thus earned by their own labours is greatly valued by the youngsters who learn to spend it carefully and wisely. In this manner are habits of industry and thrift formed, though unconsciously.

The women are taught weaving and dyeing; sewing and bead-threading to form belts, brooches, flowers, etc., as well as lace-making, embroidery, plain sewing, and so forth. The women employees do much of their leisure-time handwork, after learning it, at home—between the household chores. And the men are taught carpentry and other masculine crafts. These goods too are put on sale annually or half-yearly, and the profit is given to the workers who produced each article. The additional money earned in this fashion provides things which the employees cannot otherwise have—it may be extra milk for the baby, or a few luxury articles of food, or a *sari* for the wife, or a *dhoti* for the husband, or a clean new set of clothes for the child who goes to school! But in any case, the extra money is *most* welcome!

In view of the numerous beneficial effects the teaching of handcrafts and arts to the workers have, the author suggests that many industrial concerns in India which are not doing so should take a lesson from the progressive ones who do, and institute classes in these for the spare-time occupation of their workers.

Concluding Observations

Now, in conclusion of this series of articles, I should like briefly to sum up the need for welfare work in India among the mill and factory hands.

If true industrial prosperity is to prevail in our country, it can be obtained *only* by recognizing the importance of *every individual* who helps to make up the world of industry, and this cannot be done if we overlook the individual worker in a system of large-scale production. Western nations are far ahead of us in recognizing that if the fullest productive results are to be obtained, we must enlist the co-operation of the personality behind each pair of hands. The industrial employee is no longer to be considered merely a *cog* in the wheels of a machine, but is to be treated with the respect and consideration due to a *fellow worker* who is a human being like the boss himself.

" Industry is not, or should not be, primarily concerned with the making of money, but unless constant thought is given to the human factor in industry, the materialistic aim will inevitably remain uppermost." And *welfare work* is one method of combating this tendency by ensuring that every man engaged in the business is considered and is given his due importance in the scheme of things, and to prevent the inevitable disharmony which comes from lack of thought or understanding in matters affecting any section of the workers. Eleanor T. Kelly who has been engaged in industrial welfare work for a great number of years insists that " it should constantly be remembered that to be effective welfare should permeate the whole of the organization of a business, and *not* be considered as a separate scheme set up to counteract the bad effects of the rest of the business." It must be clearly understood that the welfare of the workers and the welfare of the business are inseparably united.

Real welfare work with true and lasting benefits to the employees can only be achieved if there is the co-operation of the entire management. This is especially true of the sectional heads of departments, or foremen and forewomen. In fact, their attitude and the methods they adopt towards the workers and the Labour Officer will form the basis of any sound scheme of welfare.

I should like to mention here that though the fundamental principles of benefit work for individual employees are everywhere the same, yet their application should vary according to local conditions.

One cannot fail to note that there is a tendency for those who have welfare work at heart, to seek to supply ready-made schemes of betterment for those they are interested in. "This is the natural impatience of bad conditions, and the feeling that if only our protégés had been blessed with our education and experience they would appreciate the benefits of the schemes we urge. This tendency is to be deplored. It entirely ignores the fact that the experience and education gained in working out the scheme is often more valuable than the actual results of the scheme itself."

" The principle of self-determination must be fully admitted if the true welfare of the individual is honestly and straightforwardly considered. Indeed, the education of the worker, in the broadest sense of the word, must be the constant concern of welfare work. For it must be borne in mind that a fuller and better life cannot be achieved by any ordering of external conditions, however ideal. True growth must come from within rather than from without, and the first essential is the desire followed by the active striving after something higher and better. The wise reformer will, therefore, always be on his guard against ready-made, cut-and-dried schemes, realizing that while fundamental principles remain the same all the world over, their working out will vary enormously according to local conditions. A scheme evolved in course of discussion and the result of mutual agreement may be slow in developing and, when complete, less perfect technically than the ideal, but it will almost invariably be more vital, more workable, and less dependent on artificial stimulus than the ready-made article, largely because the people who have helped to draft it have seen visions and dreamed dreams in the process. Progress on these lines is often irritatingly slow, but it *is* sure. Much time must be spent in laying foundations, and laying foundations is not usually a spectacular piece of work, but it remains true that a house built on rock will endure!

Nutrition and Industrial Canteens

By P. A. BHASKARAN, B.A., DIP. S.S.A.

(*Specially Contributed*)

THE need for improved diet among industrial workers has been increasingly felt in our country, especially during these years of stress and strain when a good portion of our man-power is engaged in what is known as "essential services". Never before, perhaps, has the attention of informed intelligence and Government authorities regarding the importance of industrial nutrition been so keenly engaged as it is to-day. This increasing importance of industrial nutrition has been felt due to the growing appreciation of what some nutritionists call "the sub-nutritive state" or "hidden-hunger" among our industrial workers. It only means a moderate degree of dietary deficiency of some kind. The body, when it fails to get the right kinds of food to provide it with energy, to furnish materials for building and repairing it and to provide the substances that help to regulate its complicated processes, suffers from "hidden-hunger." The workers who suffer from "hidden-hunger" will tire more easily, will be more liable to suffer from accidents resulting from abnormal fatigue, will be more susceptible to minor illness and will be prone to have lower morale. Malnutrition wrecks morale and spells defeatism and despondency. Wilder, an American nutritional enthusiast, states:—

"Nutritional deficiency saps the vitality in so insidious a way that the victim may be unaware that enough is wrong to consult a doctor . . . . The minor degrees of nutritional deficiency, although they are not fatal nor incapacitating, constitute the hub of the problem of malnutrition . . . . They undermine the will to do . . . . They seriously depress resistance to other diseases and in women contribute to the concurrence of complications during pregnancy . . . . The undernourished are unable to hold jobs if they find them . . . . They become unemployable."

This, by itself, makes an eloquent plea for the provision of improved diet to our industrial workers in order to promote the optimum efficiency and prolonged psychological well-being which will result in greater working capacity, fewer absences from work and a decrease in the number of accidents.

Food nourishes the body in three ways. In the first place, it furnishes the fuel to yield energy, which finds its overt expression as warmth and work. Secondly, it supplies the structural materials for the growth and structural upkeep of the body tissues. Lastly, it provides substances, which keep bodily conditions in the right manner, so that life processes proceed normally.

Experts are of opinion that something like 40 nutrients are furnished by the already known food materials to the human body. For purposes of convenience and clarity, we shall follow the conventional four-square grouping of nutrients, namely, (*a*) the energy requirements, (*b*) the protein requirements, (*c*) the mineral or inorganic elements and (*d*) the vitamins. To resort to a mechanical analogy, which is after all only a partial portrait of the whole picture, the human body can be compared with a motor car and the fuel foodstuffs have their counterpart in the gasolene for the automobiles, the protein and some of the minerals to the materials of which the motor is made, the remaining minerals to its lubricants and the vitamins to the ignition sparks whose own energy is insignificant but which perform the indispensable function of keeping the motor running in an orderly way.

Some Specific Nutrition Problems in Industry

To-day a large portion of our industrial population carry their meals in lunch *dubbas* (boxes). Tradition has a great sway over the regulation of the food habits in our country, and the pity of it is that they go by caste, community and region even. True it is, that some of the Indian industries have made an attempt to provide some in-plant feeding through canteens. But the extreme poverty of the workers, coupled with the lack of provision and low quality of the food served in the all-too-meagre existing canteens, necessitates the labourers's carrying meals from home.

In large and extensive plants, a single *cafeteria* is inaccessible for the major population in the factory, within the short time of the lunch period. Even when good combinations are available in some of the canteens, a large percentage of the workers are found to choose luncheon combinations that are poorly balanced. This undesirable ration is partly due to the faulty food habits of our people and it is stimulated partly by disparity in prices. Milk, fruits and vegetables in our country remain the food of capitalists and spiritual aristocrats, and it is far from the reach of an average labourer's economic means.

Poverty of cooking and serving facilities in the rapidly expanding plants is another important problem we have to face. This situation is further aggravated by the low-grade restaurants which spring up around the factory, over which the management has no control. The culinary facilities in the homes of the workers are grossly inadequate and it is not uncommon that workers come to the factory without any breakfast. It has been authoritatively stated that one-half of our fuel is eaten up in the form of sugar and bread. To this may be added the refined fats which make two-thirds of our energy intake in the form of "inert calories" furnishing fuel only and nothing else. In the large majority of cases amongst the working classes, the limited food budget is spent unwisely, along with the prevalence of fixed or faulty food habits.

These findings referring to the factory and home make it clear that while nutrition remains a family and individual problem, it is an industrial problem as well. There are a number of ways in which industrial leaders can help to improve the nutritional status of all their workers.

Three Main Lines of Approach

The three main lines of attack in the improvement of nutritional standards through industrial canteens can be directed towards (1) education, (2) provision, and (3) economy.

(1) *Education.*—The recommendations of the National Research Council in America can be profitably adopted in our country with certain modifications to suit our requirements. The recommendations can be briefly listed thus:—

(*a*) Employment of a trained dietician for supervision in the factory canteen and advice to the worker's family.

(*b*) Introduction of information about nutrition in plant publications.

(*c*) Use of pay-envelope slips, listing items of good food of high nutritional value, which are in season or in the market, available at reasonable prices and within the reach of the average worker.

(*d*) Placing artistically written posters emphasizing the importance of good nutrition or capable of creating an interest in good food habits at suitable sites about the plant, where employees usually pass or wait in line. (It may be noted that materials capable of evoking a personal interest and periodical changes in the slogans or cartoons may be particularly effective.)

(*e*) Free distribution of pamphlets and bulletins on health and nutrition matters to the workers.

(*f*) Conducting classes and demonstrations by the dietician and other nutritional experts for the worker and his wife.

(*g*) Maintenance of *cafeterias*, where foods of high nutritional values are served attractively so as to make the labourers appreciate their gastatory possibilities and nutritional worth.

(*h*) Helping the employees in growing vegetable gardens in their homes and on company-owned properties is another avenue of approach. Their efforts may be encouraged and aided by contests, classes in gardening and by collective purchase of tools and seeds. State Departments of Agriculture should tender advice and all such assistance as possible to the workers.

(2) *Provision.*—Industry should take a keen interest in the type of food served in the plant at midday lunches and any supplementary feedings furnished in between meals. The meals served in the plant should at least contribute one-third of the specific nutrients. Vegetables and salads should be prepared in an attractive manner and with minimum losses in their vitamin and mineral contents. Enriched white bread and whole-grain products can be extensively used. Special lunches emphasizing use of alternative foods (e.g., *bajri*, *jawar*, maize, etc.) can be offered at slightly lower than the prevailing prices

to increase their acceptability. A wide variety of the so-called "protective foods" such as milk, fruits and vegetables should be made available to all the labourers throughout the factory, through travelling wagons, at or below cost to encourage their consumption in preference to non-protective foods.

Æsthetics of Food

The æsthetics of food also is a point worthy of consideration in this connection. In combining the menu, the observance of the psychological factors which influence the appetite and make the diner satisfied with the appearance and flavour of the food served is an important matter. A little stretch of imagination on the part of the dietician can easily accomplish this. Menus with a limited number of choices which are varied from day to day are found usually more desirable by workers than a frequent repetition of dishes and a "sameness" produced when a large number of food choices are used daily. Frequent changes of menu have an element of surprise which adds interest to the food selection. Some broad suggestions in obtaining satisfactory combinations may be noted down below, which can be adopted with slight adaptations as warranted by local requirements and tastes.

(*a*) Planning wholesome nutritious meals that appeal to the eye, stimulate the appetite, satisfy the hunger and give pleasure to the diner.

(*b*) Seeing that good menu planning goes hand in hand with good cooking to produce foods which are appetising and in which food nutrients are conserved.

(*c*) Balancing the flavours of the menu—e.g., accompanying a bland food with a savoury one; serving strong-flavoured food with a mild-flavoured one; enhancing the flavour of a neutral food with an acid one, etc.

(*d*) Contrasting soft food with crisp, crunchy ones. At least one food in the menu should be crisp.

(*e*) Varying the shapes of food served in the plate as, e.g., avoiding several round mounds of foods or two or more squares in one plate.

(*f*) Combining colours harmoniously—e.g., using yellow, green or red food to contrast with white or neutral colour combinations, etc.

(*g*) Seasoning bland food with piquant flavouring such as tomatoes, onions, etc.

(*h*) Seeing that the vegetables on the menu are cooked just until done and served immediately to preserve their colour, flavour and vitamin contents.

Success of such a food combination policy requires a mental selection of foods that taste and look well and the using of imagination how food will look when served, and taste when eaten. Such forethought on the part of the dietician will save many of the unpalatable meals from being cooked and served, only to be wasted largely.

Mid-shift Meal Periods

The length of mid-shift meal periods is another problem to be considered. A minimum period of 30 minutes should be provided by the factory; 15 minutes for the actual consumption of food, and the other 15 as an additional allowance for toilet preparations, changing clothes, going to and from the *cafeteria*, luncheon room or canteen and the time spent in food service line. In large plants the overall length of the mid-shift meal period can be kept to a minimum by a decentralization of eating facilities through the use of mobile kitchens and canteens, stationary canteens, suitably situated lunch-rooms, etc. Where distances from the workroom to the canteen are too great, hot meals must be brought by means of pre-heated food conveyors and served to workers in areas set aside near their work centres. These food conveyors should run on a definite time-schedule to permit the optimum usage of a lunch period at each station.

"Between-meal" rest periods and refreshments is another matter meriting attention. A rest pause of 10 minutes each, with an opportunity to obtain refreshments during the middle of the first and second half of each shift, is an effective means of combating fatigue, decreasing accidents and lost time and sustaining production. The foods offered during the rest periods must be such as would permit a ready service and digestion, with a minimum amount of preliminary preparation on the part of the worker. Milk, citrus fruit juices, tomato juice, fruits and sandwiches with enriched or whole-grain bread with substantial fillings are satisfactory foods for between-meal lunches. It is important to bear in mind that coffee and tea, although stimulating for a short time, have negligible food value, even when taken with cream and sugar.

Nutrition Needs of Women Workers

Women workers in industry, by virtue of their biological and psychological make-up, deserve special consideration. Curiously enough, several dietary surveys of industrial workers are all in agreement as regards their findings, that the eating habits of women are worse than those of men. Plants employing large numbers of women should be particularly careful to make adequate provision for their nutritional requirements. An active nutrition education programme also should be instituted in their favour. The employment of women workers in night shifts is not yet a problem in India. In the West, women with domestic duties as well as young girls are employed in night shifts too; and in the former it results in the break-up of the family ties, whereas in the latter the loss of sleep affects their growth.

(3) *Economy.*—It is imperative that good meals must be provided at reasonable prices for a successful nutritional programme. To achieve this, all *cafeterias*, kitchens, lunch stands, etc., should be under plant management and should be run on a non-profit non-loss basis. A canteen should not be a means of obtaining funds for employee functions or benefits or any other extraneous purpose. It has been found that *cafeterias*, rolling kitchens or lunch stands operated by *concessionaires*—whether it be a private company or an employees' benefit association—were generally less satisfactory than the management-owned ones. The reason, perhaps, for this is their policy of " we give the men what they want."

A well-trained dietician managing the canteen can keep down the cost by intelligent marketing. Having the knowledge of when and where to buy as well as understanding the quality and nutritive value of foods is an important phase in a dietician's professional training and is of particular value in low-cost feeding.

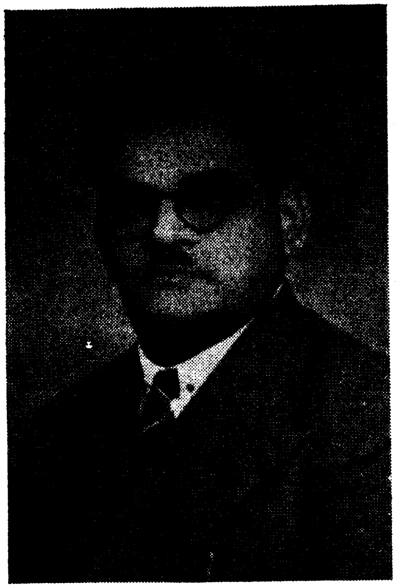
Employers also can help a good deal in bringing down the cost of maintaining a canteen. In plant-owned and employee-managed lunch rooms or canteens, the management usually provides space and basic equipment and can also subsidize those services such as heat, light and water. Even otherwise effective management and a large turnover will make the canteen " pay its way " to meet all the overhead charges from the takings. It is best that an employee-elected committee assumes responsibility for the operation of the food service employing its own commissary manager.

Conclusions

Canteen work should be recognized to be a very " tough " one. It calls forth immense energy, staying power and continuous good temper. Cooking is a job that has to be learnt and practised like any other technical skill in the process of industry.

An inspiring and instructive health education programme should be undertaken for the promotion of better nutrition in collaboration with a number of national agencies, both public and private.

Last but not least is the general atmosphere prevailing in the canteen and its psychological reactions on the worker. It must be remembered that the workers enter the canteen not as servants but as their own masters, as customers and not as employees. The discipline enforced on them should be voluntary and of a purely social nature and should not be extraneous and coercive. Intelligent and sympathetic management can create a sense of belonging and self-respect in the worker's mind by tactful handling. The practice of putting up notices regarding canteen matters can be cited as an instance in point. It should be free from all tinges of authority and command. Terms like " workers must " should be judiciously avoided and must be substituted by pleasant polite wordings like " customers are requested," etc. In short, the canteen should be run on a thoroughly democratic basis giving the employees a free hand in the management of its affairs. Democratically elected committees and their periodical meetings with a view to eliciting suggestions for improvement from members can go a good way towards success. The only thing to be borne in mind is that complaints and criticisms should be followed by constructive suggestions.



Selection of Power Plants for Textile Mills

By J. R. SOLANKEE, M.M.E.A. (India), *Chief Engineer and Manager, Mafatlal Fine Mills, Navsari*

(*Specially Contributed*)

IN days to come we must have our factories equipped with efficient and economical power plants, which are the main and daily items of expenditure; otherwise we will not be in a position to meet the keen competition which is expected in the market. The mill manager and chief engineer should use all their resources in determining a suitable power plant, etc., and for this they should consult a specialist and not rely upon the manufacturers only.

In many mills, old-fashioned Lancashire boilers, with an efficiency of no more than 50 to 60 per cent., without superheaters and reciprocating steam engines, are used. High pressure steam is by means of reducing valves used for boiling, heating and other process work, which amounts to nearly 25 to 40 per cent. of the steam generated. This arrangement is most unsatisfactory for textile mills where the process steam required is less than the admission steam quantity for the prime movers. In a number of mills, though they have installed steam turbines, yet Lancashire boilers are used for steam generation which are less economical than water-tube boilers. Further, the power transmission is through rope drive which consumes about 10 to 15 per cent. of the indicated horse-power in gearing and slippage. By using this type of drive we suffer loss in production by frequent stopping due to the rope breaking when the mills are running. Moreover, this frequent stopping of turbine is detrimental to the blading of the turbine and the urgency for restarting the turbine in order to lessen the stoppage period may prove disastrous.

The efficiency of the entire power plant usually depends more on the boilers than on the turbine and the efficiency of the high pressure steam boilers depends very much upon the type of stokers installed. Further, of great importance for high efficiency are the superheaters, high-duty economizers, air preheaters for heating the air from waste flue gases before allowing it to go to the boiler furnace for the efficient combustion of fuel, and the type of balanced, forced and induced draught fans.

Several types of boilers are available in the market and they are mostly Lancashire and water-tube boilers. Various types of water-tube boilers are available such as two-drum, three-drum, etc., to meet varying requirements. The boilers should be selected in such a way that the required steam quantity should be divided by two, then to the figures arrived at should be added 20 to 30 per cent. and that gives the capacity of the boiler for obtaining the maximum efficiency. Two boilers should be purchased for daily use and one more for stand-by, i.e., in all three.

The boilers should be equipped with the travelling chain grate of best available type, automatic stokers with 8 to

10 speeds. The speed of the stoker as well as the thickness of the layer of coal should be adjusted for all variations in load and quality of coal. This type of stokers will maintain the economy in fuel consumption and, as known, the cost of fuel for power plants is the major item of running cost.

Automatic controls, water level regulators, coal feed regulators, draught regulators, mechanical coal and ash handling equipments, etc., are available in the market, by means of which the highest efficiency of the boiler house can be obtained. However, they are not always necessary or suitable to be adopted for small power plants usually used in connection with textile mills, because there the load remains practically constant and further in a country like India the labour for maintenance is cheap.

The following instruments should be kept in the boiler house so that the conditions can be ascertained at any time :—

CO_2-Recorder and Integrator.—From the graph, the engineer can daily find out the most efficient CO_2 percentage contained in the flue gases.

Draught Gauges should be provided to ascertain the draught conditions.

Pressure Gauges and Thermometers.—These instruments should be arranged where necessary. For example, thermometers should be kept on each superheater, economizer inlet and outlet, at the chimney bottom to check the flue gas temperature.

There should also be a distance dial thermometer of a thermo-couple type on which the temperature at any place in the boiler house can be checked by the engineer.

Water intended to be used as feed water should be analysed and if found necessary should be treated by means of a softening plant. In case treatment is required, raw water should be sent to the softening plant manufacturers and guarantee should be taken regarding the quantity as well as quality of the treated water. Sometimes it is found that surface water is so hard that the recurring expenses of softening the same prove very high and in such cases it is advisable to drill a tube well and in that way get better water.

Turbines of many manufacturers are available in the market. Main types are straight-condensing and back pressure. Both types can be arranged for bleeding or pass-out. For textile mills with dyeing, bleaching, finishing, printing, ageing and sizing, etc., i.e., where process steam is required for heating, boiling, and drying purposes, which generally amounts to 25 to 40 per cent. of the steam generated, a bleeding turbine is the most suitable. The turbine should have automatic extraction and be designed for a high steam pressure and temperature. It should be directly coupled to the alternator generating at a suitable voltage. In economy, the bleeding or pass-out turbine cannot be surpassed by electric supply even though it may be cheap, because it has to be taken into consideration that the mills have to keep boilers to generate steam for process work. If the steam can be passed through a turbine, it can generate power before being used for process.

The turbine should be equipped with a condensing plant with high efficiency and having a sufficient capacity but still a low power consumption of its auxiliaries. In purchasing the turbine, the steam consumption should be guaranteed by the makers and in selecting the turbine preference should, of course, be given to the machines which give maximum overall efficiency.

For a textile mill of only 1,000 looms an automatic extraction type steam turbine will be most suitable. The turbine should be such that it should give the required load at its maximum efficiency. Just as if we require a bleeding turbine with an economical load at 2,400 kw. power factor .8. Provision should, however, be made for the turbine to take extra load if required and turbine mentioned above should have a maximum continuous rating of 3,000 kw. In case the alternator is designed for the load of 3,000 kw. and it is found at a later date that the load of the mills has increased, the load can be arranged to suit the new conditions. The changing of the economical load can be carried out easily and cheaply. Especially is this the case with the famous Stal turbines which are of the Ljungstrom type and the representatives in this country are Messrs. Asea Electric Ltd., Bombay. The turbine is of the reaction radial flow type. Owing to the principle and design of the turbine the steam consumptions are at all loads lower than any other turbine in the market. The world's record for turbine efficiency is held by the 50,000-kw. Stal Turbo-alternator set installed in the State Power House in Sweden.

An outstanding feature of the Stal turbines is that due to the small rotating masses and suitable design of the electrical rotors and turbine bearings, the wear in the bearings is negligible even after 8 to 10 years' service. It means that the wear of the sealing strips on the steam rotors is practically *nil* and the steam consumption remains for many years the same as when the turbine was new.

For a mill of more than 2,000 looms, a back pressure steam turbo-alternator and a straight-condensing steam turbo-alternator are likely to prove to be the most suitable installation. The back pressure turbo-set should be of a capacity that can give sufficient steam quantity required for process and the power generation should be at its maximum efficiency. The straight condensing turbine should generate the additional power required and the turbine should be so chosen that this is done at the maximum efficiency.

The turbo-alternators should always be equipped with necessary apparatus for easy operation and instruments should be provided so that the efficiency of the machine can be maintained and should give indications should anything be not normal. Speed adjustment motor for speed governing should be fixed on the turbine and its control should be arranged on the switchboard. A high speed automatic voltage regulator should be on the board and the voltage of the alternator should be maintained by same as well as by means of hand regulation. Further on the switchboard should be a kw. meter for three-phase, three-wire, unbalanced load, a voltmeter with change-over switch for measuring the voltage between phases and between phase and neutral, an ammeter with change-over switch for measuring the current in three phases, one k.w.h. meter for three-phase, three-wire, unbalanced load, one recording kw. meter and a power factor meter. Automatic alarm device for too low oil pressure of the turbine, high temperature of turbine oil, and for high temperature of cooling air for the generator. An air cooler for the generator should be arranged and the air should be in closed circuit free from moisture and dust. If two turbo-sets are installed there should be a reverse power relay on two generator-panels and a synchronizing panel should be installed comprising two voltmeters, frequency meter and a synchroscape combined with bright lamp arrangement for emergency.

Again, precision instruments are required for ascertaining monthly the steam consumption. The instruments should be two kilowatt meters, ammeter, voltmeter of precision type and two power transformers of required ratio for the instruments. There should be steam flow meters on the main, bleeding and back pressure steam pipes, feed-water and condensate-water meter on feed pipe line as well as on the pipe line from the condensate pump. The electrical instruments should be calibrated every year in the Government laboratory. Necessary pressure gauges and thermometers should always be kept in stock for ready replacement on the boilers and on the turbine plant. Necessary spares should always be ordered with the plant.

For a textile mill, it is always advisable to go in for electric drive instead of rope or other drives because we lose practically 10 to 15 per cent. of the indicated power in gearing, as said, and loss in production, too, due to frequent stoppages during running.

In electric drive also there are several opinions. Specially for weaving department the writer prefers to have a group drive through lineshaft having ball bearing pedestals and split-type couplings and pulleys with a suitable oil-immersed reduction gear directly coupled to squirrel cage, pipe-ventilated type motors against individual motor on each loom, because the looms have to be stopped every few minutes and at every stop the motor is to be restarted against load. The squirrel cage type induction motors of normal design consume plenty of power at low power factor during starting which increases the line losses due to heating and voltage drop.

Again, the motors used per loom must be of totally enclosed type which require fairly more power than an ordinary open type. Moreover, the open type cannot be used because of humidity and cotton flues which increase the maintenance and depreciation charges.

In warpings and sizings where machines require frequent stopping, group drive is preferable. For windings individual high torque squirrel cage induction motors with V-belt drive is better.

In the spinning department, all blow-room machineries such as bale breakers, openers, condensers, scutchers, finishers, etc., can be driven individually by V-belt or flat belt. Cards, combers, ribbon and sliver laps, drawings, slubbers, inters and rovings all should be group-driven through reduction gears directly coupled to pipe-ventilated, squirrel cage induction motor.

Ring frames should be all individually driven through commutator type variable speed motors with an automatic regulator connected to the frame. The motors should be pipe-ventilated and air-supplied through common fan via ducts and delivery may be in the department.

In the bleaching department all kier pumps should be directly coupled with totally enclosed type of motors. The pressure kier pumps should be preferred of rotary type, which can rotate in both the directions and suction can be changed to delivery and delivery can be changed to suction by simply changing the direction of rotation of motor and so reverse circulations can be done for a desired period through a special time switch and a starter.

All washing and chemicking machines winches should be through lineshaft and a suitable reduction gear and motor which should always be kept outside the department. Scutchers, water-mangles, dampings, etc., may be driven through individual motors of drip-proof type and V-belt. Finishers, stenters, felt-calenders, soapers, etc., which are always supplied with 4 to 8 speed reduction gear box should be driven through V-belt and drip-proof squirrel cage induction motor.

Calenders should be driven through a reduction gear and coupled to the variable speed type commutator motors with a crawling or inching arrangement. Printing and ageing machines should be driven through variable speed type commutator motors with a remote control.

In the folding department, the folding machines should be individually driven by a V-belt drive and push button arrangement for starting and stopping the motors.

Bale presses should be driven through reduction gears and individual motors of squirrel cage induction type.

All group drive lineshafts should have ball-bearing pedestals and split-type couplings. All reduction gears should be of precision type double helical unit and should be totally enclosed and oil-immersed.

Motors in various departments as far as possible should be standardized so that less number of spare motors are required and speeds of each motor should also be standardized so that same gear-boxes and motors can also be economically used.

Over and above this, we have to look to the power factor. For that we must select the right capacity motors with a good power factor and efficiency. Still the power factor of induction motors is found to be low and uneconomical, phase advancing apparatus, i.e., static condensers should be installed near load. Keeping the power factor nearing unity will reduce the running cost of the plant.

Making Cotton Fireproof

THAT " Fasbos " will save cotton from fire has been discovered by an Alexandria cotton export agency.

The agency has sent a letter to the Egyptian Ministry of the Interior informing it of the discovery and stating that when this substance (composed with one of the products of the Imperial Chemical Industry), named " Fasbos," is spread on the sacking or any other material in which cotton bales are wrapped, the cotton becomes immune to fire.

This discovery will save thousands of cotton bales that are destroyed by fire every year either in depots or while being transported down the Nile to Alexandria.

Correspondence

"Double Balloon Wire"

To

THE EDITOR

"INDIAN TEXTILE JOURNAL," BOMBAY

There are many people at the present time, whose thoughts are upon the future prospects of the textile industries of India. Textile machinists in different countries have already booked orders for urgent delivery to India.

In making a new beginning it is always considered advisable to start supported or "backed-up" with the most efficient assistance procurable, whether such assistance be in money, men, or machines.

Just previous to leaving England for India, the writer received a special invitation to visit one of the best known spinning and manufacturing concerns in Lancashire, Messrs. Horrocks Crewdson's, Preston. Arriving there, he was received by the whole of the managerial staff (directors, managers, etc.).

"Now then, we have got something to show you," the Chairman of the Board said, "*We are spinning on the bare spindle on the ring frame.*"

"Ah !, many have said that before now, but" "Yes, but look here," said the Chairman, handing a few cops to the writer.

"Have you spun these on the bare spindle of a ring frame ?

"Yes, you have it now !"

How they had got some castings made by one machine making firm, and other castings by another firm and so on (so that the whole thing had been done practically unknown to the outside world) is another story, but the ring frame was there all right; and spinning on the bare spindle, cops exactly like mule cops. The writer remarked: "Have you tried spinning wool upon it ?" "Why ? Do you think it will spin wool ?" "Certainly, it *should* spin wool."

The writer was thereupon commissioned to introduce it into the woollen industry; and having business in Keighley, Yorkshire, the week following, the thing was arranged, and the principle was introduced and was giving every satisfaction for several months, when I was informed that it was giving trouble.

I immediately went over to Keighley, and found that the trouble was excessive "ballooning." (I expect they had speeded the frame up.) Anyhow I suggested a "double balloon wire," and the trouble was cured. (I seem to have seen somewhere (*recently*) a notification of a *patented* double balloon wire.) As pointed out above, I used one over 15 years ago.

The writer has not interested himself in this new system of ring spinning since he left England, but thinks that the subject is worth mentioning here at the present stage of preparations for increased activity in the textile industry.

Yours, etc.,

J. H. D.

On Winding Cost

To

THE EDITOR

"INDIAN TEXTILE JOURNAL," BOMBAY

In computing the overheads charge for winding process it is the present practice in some textile mills to follow the simple arithmetic principle of dividing the total overhead expenses of the department by the total production in lbs. during a given period, making an *equal* overhead charge to all counts of yarn. A close analysis will reveal that this method is incorrect.

The present practice takes into consideration only the pound of yarn as a unit and ignores the time element occupied in winding process by each count. An equal overhead charge cannot be made in computing the cost for winding different counts of yarn. The time required to wind each count is different. If an estimate for sale price of yarn is based on this method, it would mean an undercharge for finer counts and an overcharge for coarse counts.

As I believe it, the accurate charge can be made only:

On machine-hour basis.

Alternatively, on count-lb. basis. Technical advice is necessary in fixing the normal efficiency for winding each count of yarn.

Will anyone in the textile line please point out whether my suggestion is correct?

Yours, etc.,

G. V. S. SASTRY,

Kohinoor Mills Co., Ltd., Bombay.

Dyeing of Vat Colours Without Hydrosulphite

By S. M. NANAL, *Vijiyalaxami Mills, Cambay*

(*Specially Contributed*)

NUMBERS of people are using either glucose or *gur* or molasses or mohwa flowers extract in combination with hydros in dyeing of vat colours. In case of certain easily reducible dyes like Ind Yellow G or Indigo, the abovementioned glucose type reducing agents alone can be used in dyeing them.

Colours less difficult to be reduced like Ind Blue G.C.D. can be reduced with zinc dust in presence of caustic alkali and in short stock vat. This reduced stock vat can be added to dyeing vat without the colours being oxidized and thrown out of solution. Colours most difficult to be reduced can be reduced as above but cannot be added to dyeing vat without their oxidation and consequent precipitation. To avoid this, dyeing vat must be made reducing before the addition of such reduced colours like Ind Violet RR or Cal Brill Purple 2R 800 pdr. and Caledon Jade Green B. The dyeing vat can be made reducing by adding mohwa flower extract.

The words "dyeing vat" and "stock vat" refer to laboratory dyeings only. No large-scale dyeing is carried out though its possibility is seen. But it is worth trying for those concerned, with vat colour dyeing. The manipulation of laboratory dyeing is as follows:—0.5 gm. of Ind Blue G.C.D. pdr. was pasted with 25 c.c. of condensed water containing 1 gm. caustic soda flakes, and then 0.5 gm. of zinc dust was added and heated to 140° F. for a while. 375 c.c. of condensed water containing one gm. of caustic soda were heated to 140° F. and to this the reduced colour was added. In this vat a hank of 20 gm. was dyed for half an hour. This gave the exact shade meant to be dyed.

In the same way Caledon Jade Green B and Caledon Brill Purple 4R 800 pdr. were reduced but were kept at 140° F. to 150° F. for nearly half an hour. Then they were added individually to dyeing vats. The dyeing vat of each measured 375 c.c. of condensed water containing 1 gm. of caustic soda and 2 gm. of mohwa flowers extract of the consistency of honey. The vat was at 140° F. Dyeing continued for half an hour and required depths of shades were obtained.

The mohwa flowers extract was specially prepared from full grown flowers. Zinc dust was found lying at the bottom of the vat after dyeing. So it seems less of it would also do the same work. Reduction even starts in cold with zinc dust. The recipe for dyeing is as follows:

2.5% .. Vat colour.
2.5% .. Zinc dust.
10% .. Caustic soda.
10% .. Mohwa flower extract (in case of violet and green).

Goods to liquor ratio is 1:20. Temp. 140° F.

New Textile Works in Non-Textile Towns in England

MR. H. N. Grundy, North West Regional Controller of the B.O.T., told the Oldham Rotary Club, that any post-war expansion of the textile trade should be directed towards non-cotton towns in Lancashire and Cheshire. Mr. Grundy presented a verbal "balance sheet" of the cotton trades' post-war prospects in Lancashire's industrial development. "If I wanted to erect any mills, if I were a cotton spinner or manufacturer, I would put them up in Lancashire and Cheshire towns, which at present have no cotton mills," he said. "To do this would be to help the Government's programme of diversifying industry."

He warned the industry that after the war there would be a famine of juvenile labour, with all industries competing for the fewer boys and girls available.

To counteract the labour shortage, Mr. Grundy suggested the industry would have to depend less on juvenile entrants and instead would have to take in and train adults. Extraordinary measures, he thought, would have to be taken to secure the large number of adults required.

Cotton Spinning 12

BY JAMES H. DAWSON, F.T.I.

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WE have previously dealt with the process of mixing up the cotton by combining the contents of as many bales as possible (preferably in a stack). We have also stressed the importance of the mixed-up bales being pulled into pieces as small as circumstances will allow of.

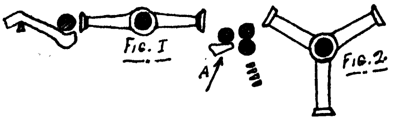


Fig. 1 shows Two-bladed Beater striking from the pedal nose.

Fig. 2 shows Three-bladed Beater striking from feed rollers—Pedal nose at A.

The next process is to break up those pieces into a condition approaching as near as can be that in which it was before being compressed into bales. “ Beaters ” are used for this purpose. These “ beaters ” perform the function of the old time “ batters ” or “ willow wands,” with which the cotton was originally “ scutched ” upon a wire-netting grid.

The connection between the hand operation and the present mechanical operations should be quite obvious from the foregoing historical fact; as will also the nomenclature of the modern blowing, or “ scutching ” room. The “ principles ” of opening and cleaning cotton are a very interesting subject to study, not only to the beginner, but also to the veteran. Each may find much that mystifies and intrigues him. It has *always* been a very interesting problem so much so that practically every session, the examination papers of the City and Guilds of London Institute contain a reference to the operation. In the 1924 examinations first-year students were expected to answer the question “ How does the opener separate dust and other undesirable matter from cotton ”; and second-year students in 1928 were asked to “ Describe fully how the various impurities and short fibres are removed from the cotton in an horizontal opener.”

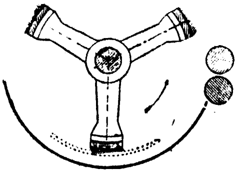
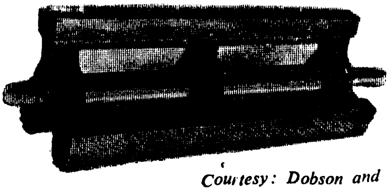


Fig. 3. Comber Beater striking from feed rollers.

Styles of Beater

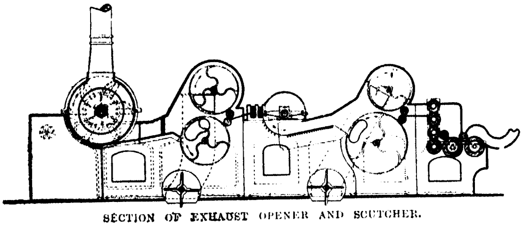
The many styles of beaters used are all intended to open up as much cotton as possible in a given time, with as small a consumption of power as is consistent with the energy expended in the work done. The beater must be paired with some type of grid bars, which assist indirectly in the opening process, and directly in the cleaning process. The relation between these two mediums may make all the difference between good work and bad. There are many types of beaters, and many types of grid bars, still more combinations in the matter of “ settings ” and speeds, and upon these combinations between beaters and bars, a great deal depends. Stripped of all its superfluities the process is simply to knock or shake about the cotton (which as we know has been previously pressed in the bale to a density of 16 lbs. or over to the cubic foot); and to loosen it up until it is as near as possible in a similar condition regarding density, as when attached to the seed in the boll.



Courtesy: Dobson and Barlow Ltd

Fig. 4. Kirschner beater

If while we are opening up the cotton, the leaf and stalk (which were picked off the plant during the removal of the seed cotton from the boll) can be abstracted,



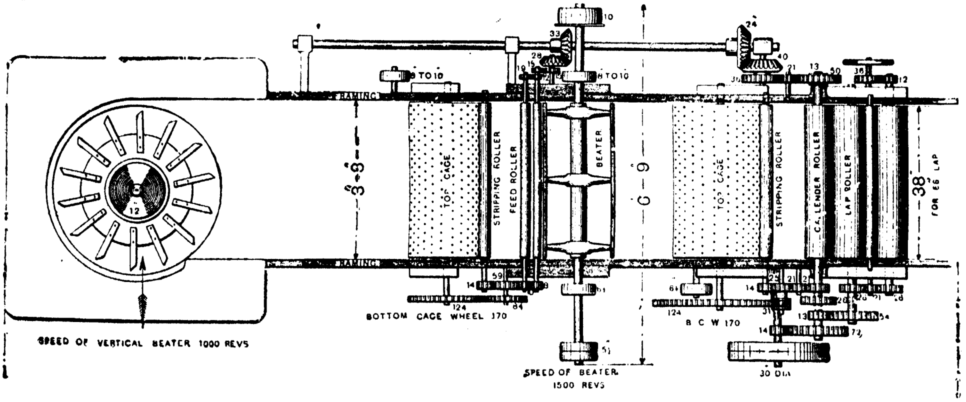
Courtesy: Hetheringtons.

Fig. 5. Section of Exhaust Opener and Scutcher

while the broken seed, and "cricket-legs" present (owing to the smashing up of the seed and leaf by the ginning machinery) can be removed along with the sand, dust, etc. (which has been blown into the bolls, during the ripening period) then we should have gone a fair distance in the blowing room process. Unless, however, we do all this without injuring the fibre, either individually or in bulk by stringing it, we shall not have done well. The sheet into which we form the opened and cleaned cotton must be so laid that it does not vary in weight much more than 5 per cent. or about one ounce per square yard; otherwise the lap into which we must roll this sheet is not a very workmanlike one. There are appliances all more or less equally capable of performing each and every one of the operations for which they are designed. It is in the grouping, or *marshalling* of these appliances, and their comparative relationship to each other wherein lies variety, both in physical results and efficiency. The many styles of beaters used are all intended to open up as much cotton as possible in a given time, with as small a consumption of power as is consistent with the energy expended in the "work done."

The beater may be (and generally is) "paired" with some type of grid bars which assist indirectly in the opening process, and directly in the cleaning process. The relation between these two mediums may make a difference between good and bad work. There are many types of beaters, and many types of grid bars. There are, however, still more possible combinations in the matter of "settings" and speeds, and upon these combinations between beaters and bars a great deal depends. In addition there is a relationship between the beater speeds, and the fan speeds, or perhaps we should substitute for "fan speeds" their exhausting capacity, because the same fan running at the same speed may exhaust a lot more air from one machine than from another, *even of the same make*. This may be owing to the difference in the flue construction whereby the fan may be working against a bigger friction resistance, caused by crooked, cramped, or otherwise unsuitable outlet passage. Besides this there may be leakages in the machine itself, allowing short circuits of the draught. It will thus be seen that the relation between beaters and fans and flues is a matter for serious consideration.

Dealing first with the available types of beaters we may say that practically every known mechanical principle of imitating the "batting" action, (which was the old hand method of "scutching"



Courtesy: Hetheringtons.

Fig. 6. Plan of machine comprising vertical beater "Crighton" type and two-bladed horizontal beater with necessary cages and lap end.

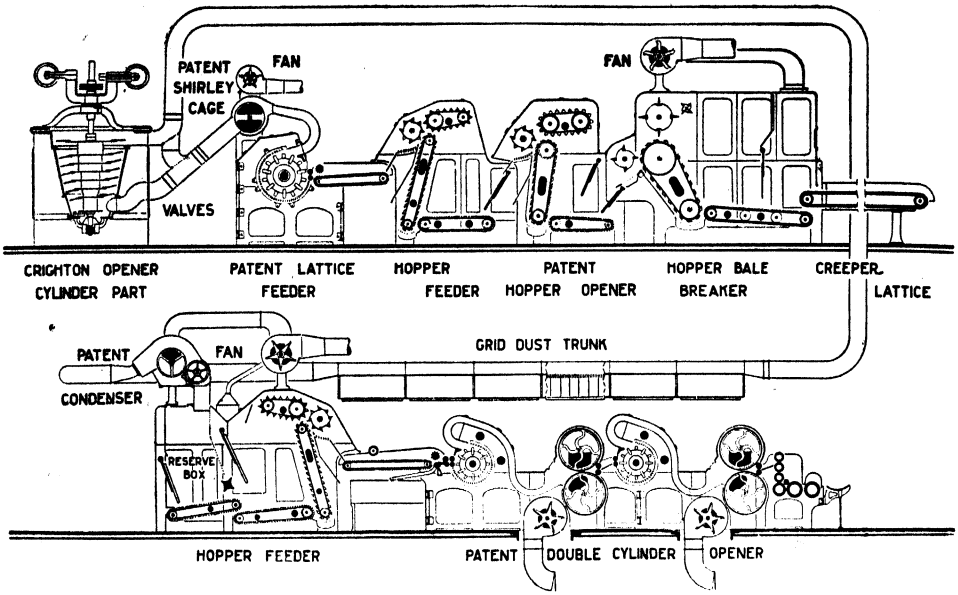


Fig. 7. Sectional view of the machine as described.

the cotton with " willow " twigs or wands while it lay upon a wire meshed screen) as previously mentioned, is adopted. Every beater " batts " the cotton on to or against some screen or grid arrangement, during the operation, thus both opening it up and ejecting foreign matter. There is, however, one very important difference between the methods of placing the cotton between the beaters and the grids. In some makes of machines, the cotton does not receive the full effect of treatment from the beater until it has passed some distance into the beater chamber, and is in a fairly satisfactory position and condition to obtain the maximum benefit therefrom. In other makes the beater exerts as much force upon the material when it is gripped and held captive between a pair of feed rollers, as it does when it is loose or free in the beater chamber.

Again, there are beaters the principle of which in reality *anticipated* what is now considered the most approved method of opening up the matted cotton; that is, by a pulling action as against a striking action. All spiked beaters are in *that* category; but when there are superimposed spokes, as in the "Buckley opener," the principle is quite obvious. The trend of opinion now seems to be in that direction.

Even the " Crighton," which at one time was considered to be the speciality for short staples and dirty cottons, is now available and successfully used for dealing with both long and short staple. Modifications in detail, principally in the " setting " arrangements, make this possible. We now, however, have what one may term " the all through machine," one which will first open the matted cotton, then clean it, and afterwards form the lap. The capabilities of this machine are such as to enable us to dispense with several of the usual blowing room machines. It is comprised of all the necessary details to convert the cotton from the bale form to the lap form. During its passage from the bale to the lap the cotton is also subjected *twice* to the dust extracting process.

This combined series of machines consists of the following sections; first a hopper bale breaker, fed by a creeper lattice, which as the writer pointed out in a previous chapter, saves all the lifting of the cotton over the high sides of the hopper. After leaving the hopper bale breaker the cotton passes into a hopper opener; thence to a hopper feeder, which delivers the *now* well opened cotton on to a travelling feed lattice. This lattice delivers the cotton through a pair of feed rollers to a cylinder beater with projecting segments, sometimes termed discs, sometimes knives. This beater is provided with grid bars which extend for about three-fourths the circumference of the circle, described by the beater; giving the maximum opportunity for the removal of broken leaf, sand, etc. From thence the cotton is subjected to a " dust extracting " process, by its passage through a " Shirley cage dust extractor," and after leaving this dust-extractor it is treated by a Crighton upright opener. Entering at the bottom of this Crighton, the cotton is drawn out at the top, by a fan which is working in conjunction with a condenser and reserve box, and hopper feeder. During its passage from the Crighton to the reserve box the cotton passes through a battery of 6 lengths of dust trunk boxes, receiving all the well-known benefits to be derived from its contact with oxygen, as well as the cleaning action. The oxidizing of the cotton at the blowing room stage has a very telling effect upon its "bloom."

Some years ago there was a certain amount of excitement in textile circles in Manchester regarding the appearance of a new type of cotton opening machine. Of German make, it was to be " staged " at a Textile Machinery Exhibition to be held in Manchester. British textile machinists were naturally excited, as it was being well recommended. The writer was commissioned to examine it and write up its merits, principal features, etc. The only merit discoverable by the writer was, that it treated the cotton whilst loose in the air (as the Crighton does), and the action of the oxygen during the passage through the machine " bloomed " up the fibres. *These facts the writer stressed forcibly.* Since then the design of British blowing room machines allows for as much oxidization as possible during the passage of the cotton from beater to cage; and instead of the cotton flakes getting on to the cages *as quickly as possible*, after being struck from the feed rollers, the machines now generally provide for a passage or tube through which the cotton is drawn giving an interval sufficiently long, to allow of the fibres to be " bloomed " or oxidized.

Revolutionary Agricultural Weed-killer

AN entirely new and revolutionary type of selective weed-killer for agriculture has been discovered by Imperial Chemical Industries, England. After exhaustive tests lasting two years, trials have now been put on a nation-wide basis by I.C.I. and by the Ministry of Agriculture, U.K., through the County War Executive Committees.

The weed-killer which is known as Methoxone is a growth substance of the plant hormone type. It was in 1940 that I.C.I. discovered that two chemicals of this type showed remarkable properties as selective weed-killers. Their peculiarity was that they would kill charlock and many other weeds without harming cereal crops. This justified further research into the plant hormone type of substances, and in 1941 it was found that all had properties as selective weed-killers, some of them being extremely active.

In 1942 one of them, Methoxone, was selected as likely to be the most useful for agricultural purposes. In 1942, other scientists in Great Britain also began investigations on a parallel substance, chloroxone, the name given in Britain to the weed-killer recently announced by the Americans and called by them D.C.P. (It may be noted that the first experiments with chloroxone as a weed-killer began in the U.S.A. in July, 1944.) Field experiments on a large scale with Methoxone and Chloroxone were carried out during 1943 and 1944 by I.C.I. and the Agricultural Research Council working together. As a result of these trials Methoxone proved itself the more effective of the two.

The selective properties of Methoxone lie in its power to kill certain types of weeds while leaving cereal crops and grasses unharmed. The trials already carried out have shown that when it is applied at a rate of 1 lb. per acre, weeds such as yellow charlock, wild radish, corn buttercup and pennycress growing in corn are killed, but the crop is unharmed. The most important factor arising from this revolutionary discovery is that weeds can be eliminated in the early stages of growth before they have been given a chance to rob the crop of the food available in the soil. Large increases in yields of wheat, barley and oats should result. In grassland buttercup has been completely eliminated, thus making available increased food for cattle.

The programme of Methoxone trials for this season is the most extensive ever carried out in England and is designed to obtain information upon a wide range of weeds under a variety of conditions.

Pre-cleaning and Ginning Tests on Indian Cottons*

By NAZIR AHMAD, O.B.E., PH.D. (Cantab.), F. Inst. P., J.P.

THE separation of fibres from seeds, technically known as ginning, occupies a very important place in the passage of cotton from the fields to the factories. If the ginning machines are properly looked after, if the speeds and settings in these machines are suitably adjusted in respect of the types of cottons ginned, if the seed cotton is presented to the machines in a good condition, very little damage is likely to be done to the fibre. If, on the other hand, the machines are not properly attended to by the supervising staff on account of either ignorance or incapacity, if wrong speeds and settings are employed, if the seed cotton is not presented to the machines in a good condition, e.g., it is wet or matted, the ginning is not efficient and the quality of the lint is likely to suffer in this process. It is clear, therefore, that every care, coupled with scientific knowledge, should be exercised in the ginning process if the best results are to be obtained in maintaining the quality of Indian cotton at a satisfactory level.

The gins used nowadays are either roller gins or saw gins. The former are again sub-divided into two classes, viz., single roller gins and double roller gins, while the latter are also of two types, viz., Brush gins and Air-blast gins. While in America 95 per cent. of the seed cotton is ginned on saw gins, in India the bulk of the seed cotton is ginned on roller gins. These are comparatively simpler in construction than the saw gins and the adjustments can be made more easily. The most important machine factors in the roller gin are the speed and material of the roller, the overlap settings between the fixed and the moving knives for single roller, the position of the fixed knife and the alignment of the oscillating beater in the double roller, while in a saw gin the more important factors which govern the output and quality of the ginned cotton are the rate of feed, the density of the seed roll, the saw speed, the condition of the saws, the position of finger ribs, etc. In both types of gins the condition of the seed cotton which is fed in the machines plays an important part, and it has been found that good results are obtained if seed cotton is subjected to a pre-treatment for opening and it does not contain moisture above a certain limit.

In order to dry the seed cotton, whenever necessary, certain types of driers have been designed in the last few years and have come into use in the U.S.A. Furthermore, in order to open the seed cotton, especially if it is in a very matted condition and contains a fair amount of trash in the form of leaf bits, stalks, hulls, dirt, etc., several pre-opening machines have been designed and have found favour with the ginning factories in the U.S.A. These machines not only perform the function of opening the seed cotton but they also remove some of the impurities associated with it. They do not ordinarily inflict any injury to the cotton fibre, but they vary considerably in regard to their ability to open and clean seed cotton, consumption of energy, output, etc. These machines are now attracting the attention of the ginners in India, and it is anticipated that their use will increase with time.

Most of the ginning factories in India work for about four to six months in the season, while during the remaining months they remain more or less idle. During the busy period they are fully occupied with the ginning of large quantities of seed cotton which often belong to several different types. During this period their chief concern is to obtain the maximum output so as to be able to gin the largest quantity of seed cotton in the shortest possible time. They are not, therefore, in a position to carry out any experiments in order to ascertain the right speeds and settings for the different types of Indian cottons. It is clear that knowledge on these lines should be provided to the managerial and supervising staff of the ginning factories so that the ginning of Indian cottons may be carried out under optimum conditions.

While the ginning factories' primary concern is the output, they have comparatively less interest in the quality of the ginned cotton in which the spinner is more deeply interested. It may happen that in order to increase the output, certain speeds and settings may be employed which may not be quite suitable to a particular type of cotton and which may, therefore, result in a certain amount of injury to the fibre. It is, therefore, very necessary that the question of speeds and settings should be studied from the point of view of striking a happy mean between output and quality. As explained above, this study cannot normally be carried out in ginning factories which are fully occupied during the busy period, and which often lack the necessary equipment and scientific personnel to carry on such investigations.

In order to make a systematic study of the processes relating to the pre-cleaning and ginning of Indian cottons, a ginning section was added to the Technological Laboratory in 1940-41, and since then experiments have been conducted with different types of Indian cottons on the different types of pre-cleaning and ginning machines. The main objects of these experiments have been to compare the efficiency of pre-cleaning machines, to study the effect of such factors as overlap settings, roller speeds, etc., in the roller gins and the rate of feed, saw speeds, etc., in the saw gins on the quality of ginned cotton, taking into account such machine factors as power consumption, output per hour, etc. It is proposed to publish the results of these tests in the form of Technological leaflets, each leaflet pertaining to one variety of cotton, but in order to save space in each leaflet, it is proposed to give a brief account of the machines employed in these tests in this leaflet, which will be followed by others describing the results of tests on various Indian cottons.

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* I.C.C.C. Technological Leaflet No. 7.

Details of Machines Used

The ginning section of the Technological Laboratory is equipped with three kinds of pre-cleaning machines and three types of gins. These will now be described briefly:—

Pre-cleaning Machines.—(1) Double cylinder seed cotton opener manufactured by Messrs. Platt Brothers (England). This machine is 50″ wide and is fitted with delivery lattice and a fan for updraft. Its driving pulley is 3½″ wide with a diameter of 12″ and it has a speed of about 530 r.p.m. The power required for running this machine, exclusive of that required for shafting, is about 3½ b.h.p. and the output is stated to be about one ton of seed cotton per hour.

(2) The feeding, extracting and cleaning machine (F.E.C.) manufactured by Messrs. J. E. Mitchell & Co. (U.S.A.). The driving pulley of this machine has a diameter of 12″, the speed of the main pulley is about 350 r.p.m. The power required for working this machine is 1 b.h.p., and the output is stated to be about 2,000 lbs. of seed cotton per hour.

(3) The five cylinder I-type cleaning machine No. 2, manufactured by Messrs. Hardwicke Etter Co. (U.S.A.). This machine has a width of 50″ and is provided with five spiked cylinders, the length of spikes being 2″. It has an attachment of a cleaner screen having mesh of 3 × 3 size which can be changed as and when required. The driving pulley has a diameter of 18″ giving a speed of approximately 500 r.p.m. while the power required for working the machine is 3 b.h.p., and the output is stated to be 4,000 lbs. of seed cotton per hour.

Gins

The following gins are installed in the section:—

(1) *Saw Gin,* Commander Air-blast type, manufactured by Messrs. Cen-tennial Cotton Gin Co. (U.S.A.). This experimental gin has 40 saws of 12″ diameter, and is equipped with a four-cylinder ball bearing opener and feeder attachment in which the rate of feed may be varied by operating a lever. The diameter of the fan is 25″ and it rotates with a speed of about 2,500 r.p.m. The gin is fitted with a hull extractor, double cylinder battery condenser and also with variable adjustments for adjusting the position of nozzles with respect to saw blades. Normally a pulley of 16″ is used on the saw shaft to obtain a speed of about 680 r.p.m., but the saw speed may be varied by using pulleys of different diameters on the shaft of the saw blades.

(2) *Double Roller Gin.*—New patent double roller gin (Messrs. Volkart Brothers). The driving pulley has a diameter of 7½″ and the gin has a speed of about 925 r.p.m. The rollers are driven by fully encased machine-cut reduction gears. They have a length of 40½″ and the power consumption of the gin is 3½ b.h.p. exclusive of the power required for shafting. Grids having slots of 1/4″ and 5/16″ are provided and the normal output is stated to be about 90-100 lbs. of ginned cotton (lint) per hour.

(3) *Single Roller Gin.*—Double action single roller Macarthy gin manufactured by Messrs. Platt Brothers (England). This gin is fitted with a feeding attachment, which can be used or removed as desired. In these experiments the gin was generally used without this attachment. The length of the roller is about 40″ and the diameter of the driving collar pulley for the roller on crank is 5″ and its width is 3″, fast and loose driving pulleys 7″ × 4″. The speed of the driving pulley is about 600 r.p.m. which can be changed as desired and the power required for working the machine is 2½ to 3½ b.h.p. Adjustments are provided for overlap settings while the speed of the roller may be changed by using suitable pulleys on the roller shaft. In the two-roller gins, rollers of different materials such as chrome, leather, cardboards, etc., may be used but in these experiments only full chrome rollers were employed.

Tests have been made on a number of Indian seed cottons using different pre-cleaning machines and their combinations with different saw speeds and rates of feed in the saw gin and different overlap settings and roller speeds in the roller gins. The results of these tests will be published in the leaflets of this series.

Two points, which are common to all these tests, may be borne in mind while perusing the subsequent leaflets. In the first place, the experimental saw gin used in these tests has only 40 saws though it is similar in every other respect to the large gin, having 80 saws, used in the factories. But, as a result of its having half the normal number of saws, the output per hour would be about half of that obtained with a full size gin. Secondly, the output per hour recorded in these tests would, in general, be less than that obtained in a factory owing to the operation of another factor, namely, the size of the sample. In view of the fact that a large number of tests with different pre-cleaning treatments, speeds, settings, etc., were contemplated for each cotton, it was necessary to keep down the size of each sample, as otherwise the total space required for storing the seed-cotton of different varieties, arriving more or less at the same time, would have been much more than that available in the ginning section of the Laboratory. After careful consideration, it was decided to carry out the pre-cleaning tests on samples weighing about 500 lbs., saw gin tests on samples weighing 200 lbs., double roller gin tests on samples weighing 80 lbs., and single roller gin tests on samples weighing 40 lbs. each. Even with these restricted samples several tons of seed cotton of each variety were required to undertake all the tests. But since the output of the machine per unit time is rather low at the start and towards the end of the operation, its effect is felt relatively more on small-sized than upon large-sized samples. As a result, the output per hour would, in most cases, be less than that obtained in a factory in which bulk cleaning or bulk ginning is carried out lasting for several hours during each day. This point was verified by doing bulk ginning on large size samples in several cases, when outputs approximating to those obtained in an average factory were recorded. It should be stressed here that unlike the ginning factories, the emphasis in these tests is not only on output per hour, but also upon the effect of such factors as pre-cleaning, different saw speeds, different overlap settings, etc., upon the quality of the ginned cotton, which forms an important part of this study.

Surat 1027 A.L.F. (1940-41 Season)

This cotton is grown over an area of about 300,000 acres in the Broach tract, i.e., Southern

Gujarat, Broach and Surat Districts and adjacent parts of Baroda State, Navsari District, Rajpipla and Ankleshwar. It is an improved strain, being a pure line from an individual selection made in 1917-18. It is sown usually in the third week of June and picked from the last week of February onwards. The sample used in these tests was grown in Surat District.

Pre-cleaning Tests.—Each sample in duplicate lots, each weighing about 500 lbs., was passed once through each of the three pre-cleaning machines.

The output per hour in the Hardwicke Etter machine is significantly higher than in the other two machines. The power consumption in F.E.C. and Hardwicke Etter machines is significantly less than in Platt's opener, which also removed lower percentage of trash than the other two machines. In the trash removed by the H. E. machine a small quantity of seed cotton was also found, which can be recovered by a subsequent passage if necessary.

Effect of Pre-cleaning.—The following conclusions may be drawn from the results obtained:—

(1) Seed cotton opened in the F.E.C. and the H.E. machines gave higher output in the saw gin than that opened in the Platt's Opener.

The high output noticed for the unopened seed cotton is mainly due to its matted state and to a small extent to the presence of trash.

(2) Among the saw-ginned samples the sample opened in Platt's Opener consumed less power than the samples opened in the other two machines.

(3) Among the saw-ginned samples, the seed cotton opened in the F.E.C. and Platt's Opener machines gave the strongest yarns, that opened in the H. E. machine took the next place, while the unopened sample yielded the weakest yarns. For the D. R. gin, however, the unopened sample and the sample opened in the H. E. machine gave somewhat better results than the samples opened in the F.E.C. and Platt's openers.

Comparisons of Different Gins.—The mean values lead to the following conclusions:—

(1) The ginning percentage was slightly higher for the double roller than for the saw or the S. R. gin.

(2) The power consumption was lowest in the saw gin, higher in the D. R. gin and highest of all in the S. R. gin.

(3) The saw-ginned samples gave higher mean fibre-length and lower length irregularity percentage than the samples ginned on the D. R. gin.

(4) The saw-ginned samples yielded the strongest yarns, the samples ginned on the S. R. gin came next; while the samples ginned on the D. R. gin yielded the weakest yarns.

(5) The yarns spun from the saw gin are slightly neppier than those obtained from samples ginned on the double roller gin.

Effect of Saw Speeds in the Saw Gin.—The following points are worthy of mention regarding the results:—

(1) The output per hour increases and the power consumption decreases as the saw speed is increased.

(2) The sample ginned with the lowest saw speed (600 r.p.m.) gave higher mean fibre length than that ginned with a saw speed of 680 r.p.m. The fibre length irregularity tends to increase with saw speed.

(3) The sample ginned with a saw speed of 680 r.p.m. gave weaker yarns than the samples ginned with the other two speeds.

Effect of Overlaps in Double Roller Gin.—The following points may be noted:—

(1) An overlap of 5/16″ gave higher output than an overlap of ¼″, while the output with an overlap of 3/16″ was very low.

(2) The ginning percentage with an overlap of 5/16″ was higher than that with an overlap of ¼″.

(3) The power consumption is lower with overlaps of 5/16″ and ¼″ than with an overlap of 3/16″.

Effect of Overlaps in Single-roller Gin.—The following points may be noted:—

(1) The output with overlaps of ⅜″ or ½″ is higher than that obtained with an overlap of ⅝″.

(2) The ginning percentage tends to decrease as the overlap is increased.

(3) The power consumption is much lower with overlaps of ⅜″ or ½″ than with an overlap of ⅝″.

The Defeat of the Magnetic Mine by Buoyant Cables

(*Concluded from page* 907)

buoyancy obtained by stranding the conductor on to a fairly large diameter steel spiral having plugs inserted at intervals so that the cable centre would not become completely flooded in the event of damage to the external sheath.

In this case, the cable was not to be towed behind a vessel but was intended to be manhandled and used in the form of a complete loop, so that end fittings in this case were not of great importance.

Smaller Buoyant Cables

In the early part of 1944 an entirely new service requirement arose which had to be supplied in addition to the continued production of the large buoyant cable. The supply of these cables was very urgently required, and for this reason after due consideration it was decided not to adopt the inflated elements, but to modify an alternative design of the large size cable which had been produced in some quantity, employing cork cylinders and expanded rubber.

Although the service demands for this type of cable were not so great as for the main cable, all essential requirements were rapidly met and gave complete satisfaction.

Conclusion

The ultimate overthrow of the enemy is due in no small measure to the success of British scientists and British manufacturers in developing the complete answer to Hitler's cherished "secret weapon"—the magnetic mine, and Henley's are proud of the part they played in this success.

Lakshmi Textile Mills Ltd., Bihar

THE company has been formed with an authorized and issued capital of Rs. 25 lakhs divided into 10,000 preference shares of Rs. 100 each and 150,000 ordinary shares of Rs. 10 each. 80,000 ordinary shares have already been allotted to the Directors, the Managing Agents and their friends but 10,000 preference shares and the remaining 70,000 ordinary shares are now being issued to the public.

The following are the directors:—

Lakhi Prasad Shah, merchant, 9, Jagmohan Mullick Lane, Calcutta, Director, Behar Spinning and Weaving Mills Co., Ltd., etc.; C. P. N. Singh, merchant, banker and zamindar, Vice-Chancellor, Patna University, etc.; P. D. Himatsingka, solicitor, 6, Old Post Office Street, Calcutta; Rai Bahadur Banshidhar Dhandhania, merchant, Bhagalpur; Jhariram Bhadani, merchant, Managing Director, Hirjee Mills Ltd., Bombay, etc.; Nandlal Chowdhury, merchant, Bhagalpur; Mahabirprasad Dalmia, merchant, Calcutta.

Shree S. B. Limited, 9, Jagmohan Mullick Lane, Calcutta, are the Managing Agents.

The company has been formed for the purpose of establishing one or more textile mills in Bihar. The company will carry on the business of spinning, weaving, dyeing, bleaching, mercerizing and printing of cloth and yarn, both cotton and silk. It is proposed to erect the mills at some place near Bhagalpur which is the junction of the E.I.R. and O. & T. Railway and is also accessible by metalled road and river. There are now very few cotton mills in Bihar and their production is not sufficient to meet even a portion of the demand of the province. Bhagalpur is famous for its silk and weaving industry and the company will therefore be able to get trained labour at the spot. The war has proved conclusively that the present cotton mills in India, even if they work up to capacity, are unable to meet the internal demand of cloth and yarn. There is a cloth famine in the country and Bihar is one of the worst sufferers because it has very few mills. There is always a great demand of Indian textiles from Middle East, China and other neighbouring countries and due to the devastation caused by the war and owing to the big post-war reconstruction programme of the various countries such demand is likely to increase to a great extent after the war. The company intends first to start spinning mills with about 25,000 spindles to manufacture yarn which is in great demand in Bihar. Later on it proposes to equip the factory with looms, also to weave cloth, both silk and cotton. Provisional order for the purchase of machinery has already been placed with Messrs. Tweedales and Smalley (1920) Ltd., the well-known textile machinery manufacturers of U.K., and a sum of Rs. 1,00,000 has already been paid to them in advance.

Jobs for Demobilized Servicemen

Co-operation of Industrialists

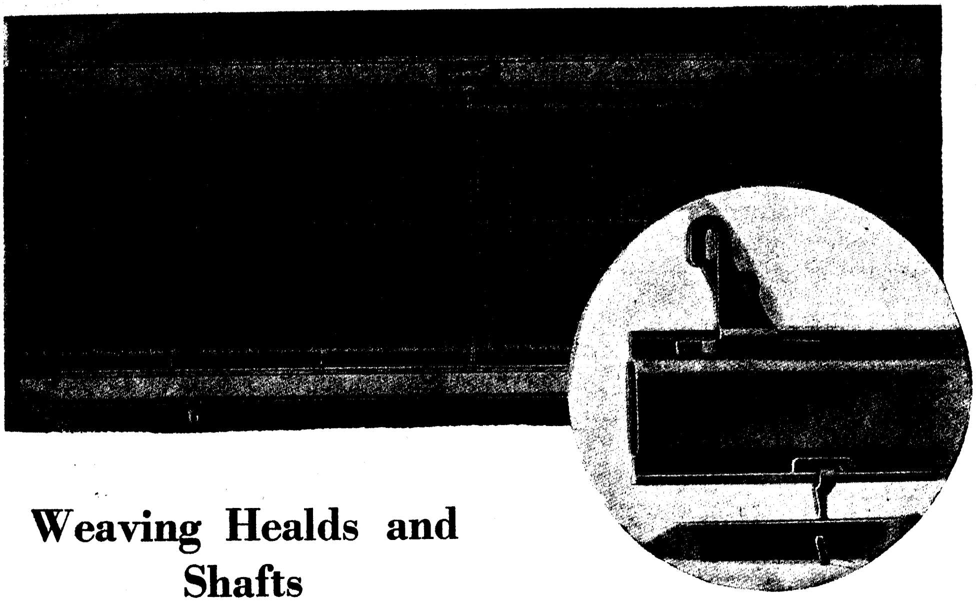
"IF the co-operation extended by the employers of industrial and commercial establishments is continued, there will not be much difficulty in finding jobs for demobilized servicemen in Bombay Province and, in fact, other Provinces," observed Mr. E. B. Temple, Manager, Bombay Employment Exchange and Technical Adviser to the National Service Labour Tribunal, in an interview with a representative of the *Times of India*.

"We are expecting the Provincial Governments," Mr. Temple said, "to start post-war development schemes. When they come into being, these demobilized men will be employed." Tatas, he added, were supplied with trained technicians by the Bombay Employment Exchange when they opened a new factory in Kathiawar.

The textile and shipping industries, Mr. Temple thought, would not be affected by the end of the war and would provide ample scope for the absorption of the demobilized servicemen as well as trained technicians.

At the Bombay Employment Exchange, nearly 500 to 600 ex-servicemen and trained technicians were pouring in for employment every month, out of whom about 250, on an average, were found employment. Since the opening of the Exchange in 1943, 7,279 trained technicians were registered and 3,990 were able to secure jobs.

Giving details of the Government of India's new scheme for the establishment of employment exchanges in important cities and towns in the country, Mr. Temple said that there would be, in all, 71 exchanges, including the existing 10 exchanges in Bombay, Madras, Calcutta and other places.



Weaving Healds and Shafts

IN order to achieve maximum output with modern looms it is necessary that the warp to be woven must be handled as carefully as possible and thread breakages must be avoided. It is generally known that the output of a loom does not depend so much on the number of shots recorded per minute as on the loss of production caused by stoppages owing to thread breakages. Messrs. Grob & Co., Ltd.,* of Horgen, Switzerland, well-known manufacturers of weaving appliances, undertook the task of perfecting all parts through which the warp has to pass in a weaving loom.

Grob All-Purpose Heald for Weaving of Sensitive Materials

Flat Steel Doup Healds for Leno Weaving

There is, for instance, the Grob All-Purpose Heald, the name of which signifies that it can be put to universal use. It has a very efficiently modelled, highly polished thread eyelet; knots and lumps in the thread do not catch, but pass through the eyelet without the slightest difficulty because of its special shape and position. The Grob All-Purpose Heald is said to be thinner than any other wire heald and thereby makes possible a smooth and even shed even in cases of very close adjustment. Good results in weaving have been achieved with the Duplex All-Purpose Heald, which are mounted on a normal shaft with one pair of rods only. Owing to their special shape they form two rows, which facilitate the weaving of very closely set counts. Textures of extreme density usually require about six shafts when steel-wire or thread heald harnesses are used—but only four or sometimes even two shafts may suffice when Duplex healds are employed.

The Grob All-Purpose Heald is stamped from one piece and has neither rough wire coils nor soft solder joints into which the warp thread can work its way. Completely smooth and highly polished, it avoids all friction and lends itself to the weaving of all warp materials, even the most sensitive such as staple fibre and rayon. Grob All-Purpose Healds are nickel-plated and can be used for fibres of bright and delicate colour ; they do not spoil the material as is sometimes the case with tin-plated wire healds. Another advantage of these healds is that they can be threaded very quickly.

Novel Lightmetal Weaving Shaft

Some of the disadvantages of the usual wooden frame are its inadequate stability, insufficient resistance to humidity, and the frequent jamming of the shafts, when changing the shed, because of thin metal lateral supports. With the object of eliminating these and other troubles, Grobs constructed the Slider Weaving Shaft with light metal staves to provide an ideal solution of the problems involved. The special feature of this shaft lies in the hooks supporting the heald rods, the so-called *slide-hooks*, which *can be adjusted right along the entire length of the frame.* The shaft staves are hollow-drawn in " Anticorodal " light metal alloy. They are provided on each side with accurately dimensioned T-shaped slider bars to receive the slide hooks as well as the raising and lowering hooks. The slide hooks adjust themselves automatically according to the warp threads and can cause neither gaps in the harness nor streaks in the material.

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* Their Representatives in India are **Messrs. Volkart Bros. of Graham Road, Ballard Estate, Bombay,** with Branches at Calcutta, Cochin, Karachi, Lahore, Madras, Ahmedabad, Cawnpore and Coimbatore.

The lateral shaft supports are made of "Lignostone," a very compact artificial compressed wood which does not warp in damp atmospheres or humid, hot climates. The construction of the supports allows the shafts to glide only on this extremely hard wood whereby a smooth shaft movement is achieved. The lightmetal shaft staves are very slender and can, therefore, also be employed for shaft plant with narrow or small divisions.

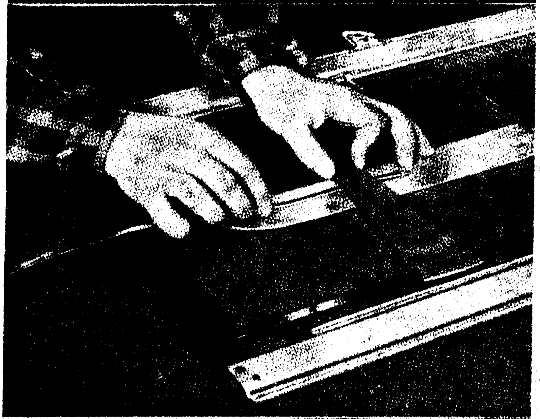
The frames are fitted with specially designed raising and lowering hooks that are adapted both for the new, as well as the old styles of shaft motion. The raising hook is provided with a simple, but very effective pawl that quite prevents the shaft from falling down. Although these hooks can be adjusted by hand, their gripping action retains them firmly at the position where they have been placed. The central supports that cannot be dispensed with for certain wider frames are of completely novel design; they react both to pull and push and can also be adjusted by hand.

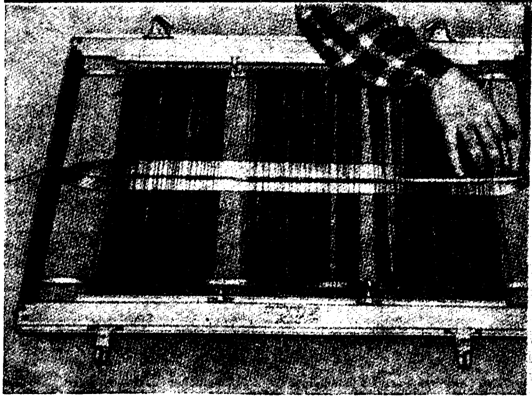
The Grob Lightmetal Slider Weaving Shaft thus combines many advantages which can be expected of a modern weaving loom shaft for present-day technical standards. It is light, durable and at the same time extremely stable, non-sensitive to humidity, ensures an unhindered play of the healds and permits the weaving of very delicate warps from artificial fibres and mixed threads.

Special Flat-Steel Healds for Leno Fabrics

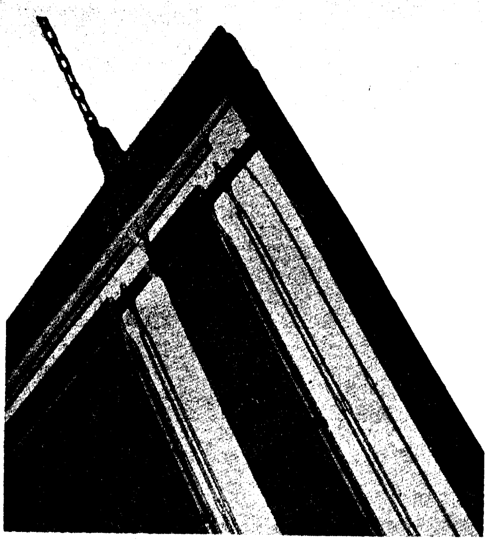
Messrs. Grob & Co. have also devoted their attention to the manufacture of leno fabrics. This material, often in fashion and in great demand, is only produced by a small number of specialized leno weaving mills. The marketing of competitive collections of leno materials necessitates the acquisition of a large number of weaving harnesses. This factor and the laborious preliminary work influence costs and price. Moreover, weaving with yarn and steel leno healds is a tedious and delicate job resulting rarely in faultless textures. For these reasons leno healds are desirable which permit speedier operation combined with greater designing possibilities. The essential feature of the Grob Flat-Steel Doup Heald is the needle which is bent like a hairpin, one arm being provided with a slot. This neede is held by two standard (lifting) healds made of double flat steel in such a way that, when one of these is raised, the other arm of the needle is free to slide in the opposite flat heald. This heald is likewise struck from one piece of flat steel and has the same qualities and wide range of uses as the Grob All-Purpose Heald.

In order to produce a leno weave the leno ends are drawn through the slot of the needle and the ground ends are passed over the leno heald between the two lifting healds. By alternative lifting of the left and right raising healds the leno weave can be achieved with its special interlacing of the two thread systems. As the one arm of the needle assumes the fotm of a slot, the leno weave can be interrupted at intervals by dropping the leno thread, and a perfect linen weave is obtained as a valuable variation in the design.





Slide Weaving Shaft with Wooden Staves



A suitable accessory to the Flat Steel Leno Healds is the Grob Slider Weaving Shaft with wooden staves. This type of shaft possesses all the merits of the adjustable bar supports. The long T-bars for the slide hooks are firmly fixed by means of grooves inside the wooden staves with short T-bar pieces on the outside of the upper and lower stave, and the whole is riveted to the wooden shaft staves. On the outer short T-bars raising and lowering hooks are attached, which are thereby adjustable over a certain limited length. This slider weaving frame with wooden staves and limited adjustability of the raising and lowering system combines the advantages of the first-mentioned Grob Lightmetal Weaving Shaft, namely, adjustable bar supports along the whole length of the frame, great stability, and raising and lowering hooks which can be firmly clamped.

The Defeat of the Magnetic Mine by Buoyant Cables

IMMEDIATELY after the outbreak of war in Europe the enemy began mining activities on an unprecedented scale in the English Channel and the North Sea. For years German scientists had worked ceaselessly to perfect the magnetic mine and with this deadly weapon, as well as mines of other types, it was hoped to destroy in coastal waters those of the Allied ships which survived the attacks of the U-boats in the open seas. There is little doubt that Hitler and his advisers were confident that the magnetic mine was the weapon for which the Allies had no answer.

During the months of September, October and November 1939, Allied losses from the mysterious new mine increased rapidly. In four days during November 1939 no fewer than fifteen merchant ships were mined off the British coasts, a battleship was damaged and a destroyer sunk.

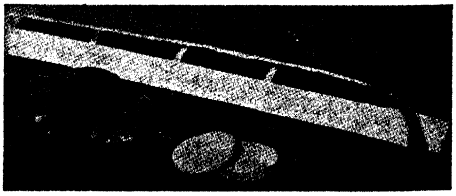
Then on the night of 22nd November 1939, came the opportunity for which the British authorities had been waiting. An enemy aircraft was heard over the area in the Thames Estuary frequented by our convoys. As it was near high water the sand flats of Shoeburyness were covered and the pilot was evidently misled as to the position of the navigable channel, for although several of the mines be dropped by parachute fell into deep water, others landed in the shallows. When the tide had receded, a party from H.M.S. "Vernon" located and secured one of these mines, and before the tide returned they were able to obtain sufficient information on which to prepare a set of special non-magnetic tools for the dismantling of the mine. At the next low tide, Lieutenant-Commander Ouvry undertook the hazardous task of dismantling the mine. Thus were revealed the secrets of this deadly weapon and British scientists were able to concentrate on the task of finding the answer.

The problem resolved itself into two parts. First, how to immunize our ships so that they could sail in safety within the danger zone without detonating the mines. Second, how to locate and dispose of the mines themselves.

Within a matter of hours a British scientist had found a means of achieving the first object. This was the de-gaussing girdle, with which Allied ships were fitted as rapidly as possible.

The second object was also achieved, ultimate success being the result of collaboration between the Admiralty experts and the electric cable-making industry.

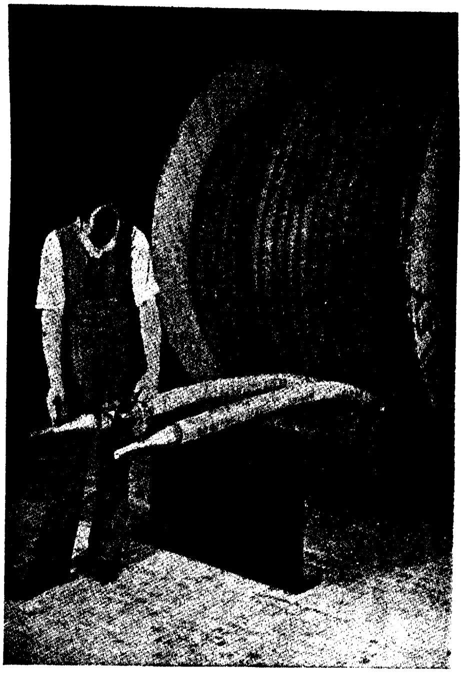
In the early days some attempt was made to deal with this menace by low-flying planes of the Wellington type, which were fitted with a large metal hoop and special equipment producing a magnetic field of sufficient intensity to explode any magnetic mines lying beneath as they passed low over the water. This method had numerous disadvantages and after a few months was aban-



The buoyant cable centre showing the inflated rubber elements, the wooden reinforcing discs and the retaining tapes doned in favour of a device known as the buoyant cable.

Principle of the Magnetic Mine

The horned mine, from the enemy's point of view, offered several disadvantages. Although a deadly menace necessitating long hours of sweeping, the methods of combating it were well known and furthermore, it was necessary for the mine actually to come in contact with the vessel in order for it to be detonated and put a ship out of action. These mines are so constructed that they can be maintained below the surface level of the sea by attaching them to a sinker resting on the sea-bottom. Cutting the connecting cable results in the mine floating to the surface when it becomes a simple matter to dispose of it.



Applying the terminals to a length of buoyant cable

The magnetic mines operated on a totally different principle. They could be sown by surface craft, submarine or aeroplane, the latter dropping them by parachute. They lay on the sea bed and, therefore, could only operate satisfactorily in relatively shallow water. The elaborate mechanism with which they were fitted was operated by a finely balanced magnetic needle, which was deflected when a considerable mass of iron, such as a ship, entered its vicinity. It was popularly supposed at one time that the mine actually rose from the sea bed and detonated on contact with the ship's hull. This in fact was not so as the mine exploded on the sea bottom, but by reason of the fact that the path of least resistance was vertically upwards, a violent explosion occurred immediately below the ship's bottom, frequently resulting in its back being broken. Normal methods of sweeping were of no avail against this type of mine since it could not be raised to the surface. Consequently it was necessary to devise ways and means of exploding these mines in site before they could interfere with valuable ships and cargo.

Buoyant Cable

The de-gaussing belt which was provided as rapidly as possible on various ships using the mined areas was only a partial solution of the problem, since it took a considerable time and many miles of cable to equip all vessels concerned. Further, though a ship so protected could safely pass over submerged magnetic mines, the mines themselves still remained as a potential menace to any vessel not so provided, or whose de-gaussing gear might be temporarily ineffective or incorrectly adjusted.

The Admiralty experts and a considerable number of British scientists were mobilized in order to find a complete answer to the problem, and many ingenious devices were tried. Intensive work was done on this problem between the date on which the first magnetic mine had been successfully raised and examined and the end of 1939.

The introduction of a powerful magnetic field into the radius of sensitivity of the mine was the obvious means of causing this to operate, but it was by no means a simple matter to devise a practical method of producing the detonating field so that the effect of the explosion should be restricted to the mine itself. By the middle of December the Admiralty experts had decided that some form of buoyant cable to float on the surface of the water was desirable, and contact had been established with various cable manufacturers with a view to producing a suitable design of such a cable. Very few manufacturers were at that time in a position to undertake work of this nature, but Henley's immediately mobilized their Research and Design experts, who worked night and day unceasingly in order to provide a satisfactory solution.

Before the end of December 1939, several experimental designs had been prepared and a small sample of the most promising manufactured. The day after this first design had been brought to fruition, an order was received from the Admiralty for a length suitable for sea trial, and this was specified to be delivered not later than the 10th of January. By mobilizing all their resources the Company actually had this length available for sea trial in six days.

These earliest designs were not necessarily the best, since existing machinery had to be adapted to produce a potentially satisfactory product, while arrangements were being put in hand to deal with the problem on a production scale.

On Christmas Day 1939 Dr. Percy Dunsheath, O.B.E., Director and Chief Engineer of W. T. Henley's Telegraph Works Co., Ltd., conceived the idea of making cylindrical tennis balls and using these as the basis of the buoyant core. By the middle of January this modified design had been found satisfactory and an order was received for a number of complete sets. A fortnight later, the first production length was delivered, and from that date onwards although some detailed modifications in the design have been made, the construction of buoyant cable in Henley factories has been continuously carried on.

The cable itself incorporated a number of

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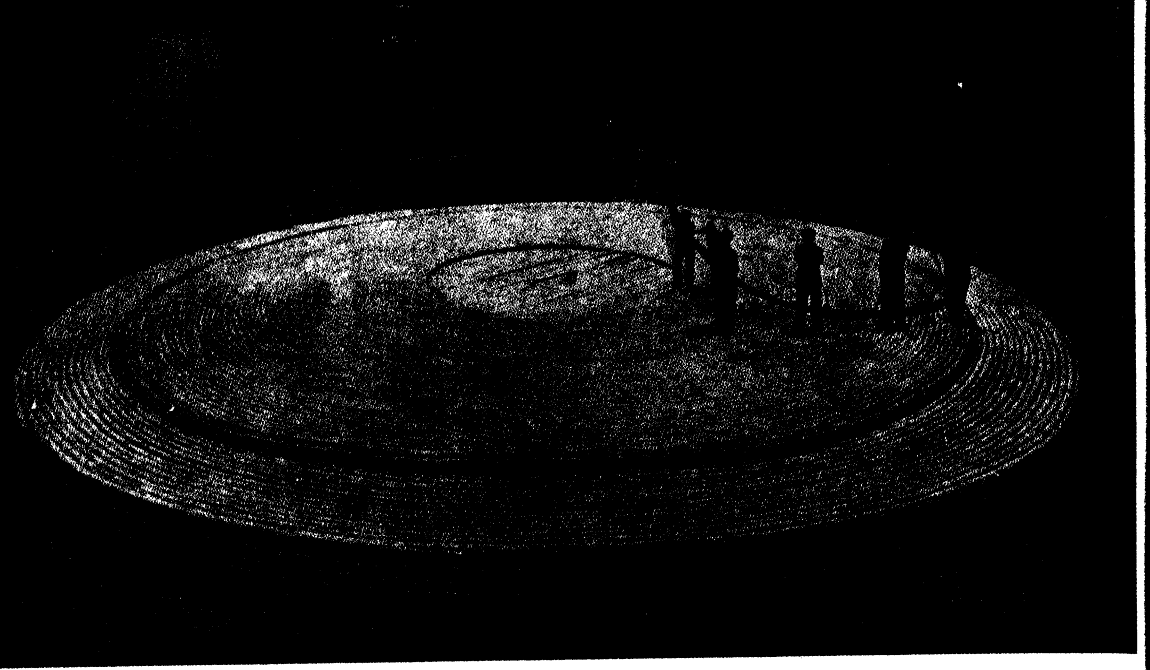

Cable for Operation "Pluto"

HOW the Allied Armies which landed in France on D-Day and finally swept forward into the heart of the German Reich were supplied with petrol is an epic story which has captured the imagination of the world. "Operation "PLUTO," must rank as one of the war's major victories.

In the following paragraphs we put on record something of the contribution towards this great achievement made by Messrs. W. T. Henley's Telegraph Works Co., Ltd., England, who were called in by the Petroleum Warfare Department, and by placing the whole of their resources at the disposal of the Government, played a particularly vital part in the success of the scheme.

The Pipe-line Cable

Plans for the invasion of the Continent necessarily took some time to mature, and it was early in 1942 that leading manufacturers of submarine cable in England including Henley's, were approached to collaborate in the production of a hollow cable capable of transmitting large quantities of petrol at high pressure. After consideration and trials of various alternative designs, a standard construction was adopted.

As a result of collaboration between the Anglo-Iranian Oil Co., Siemens, and Henley's, and the Petroleum Warfare Department, these difficulties were quickly resolved and in a comparatively short space of time orders were placed for lengths of hollow cable of 2" internal diameter, 30 miles in length, and capable of withstanding very high internal pressures. By July of that year a specification had been agreed for a suitable design of cable and production was commenced. Major problems in manufacture were involved as the total weight of the 30-mile length of cable was of the order of a thousand tons.

Of the many major problems involved, none was perhaps more important than the question of the integrity of the lead alloy tube throughout the whole length. For this purpose it was rapidly established that the Henley design of straight through lead press which had been developed after many years of intensive work in the Henley organization provided the most suitable answer. So much so that of the very large quantity of lead alloy tube required, the bulk of the total was actually produced on Henley presses, mostly in the Henley factories.

Operatives had to be specially trained in the technique of making special lead-burnt joints which would enable individual lengths to be joined up without affecting the overall integrity of the tube, the resultant weld being at least as strong as the tube itself.

The armouring and reinforcement of these cables also necessitated intensive research. Special reinforcing tapes had to be produced in collaboration with the steel manufacturers and the armouring machinery specially adapted to ensure the greatest perfection throughout the whole of the length. The cable was originally required to work at a maximum internal pressure of 750 lbs. per square inch, and in view of the magnitude of the undertaking it was obviously necessary to carry out the most rigorous testing of the cable before the production of the design on a commercial scale could be authorized. Results of these tests indicated that the cable was so well designed that it had an ample margin of safety, so much so that later the same design was operated at a higher internal pressure than that originally proposed.

A number of lengths of cable having this construction were successfully produced, and thoroughly tested under typical service conditions.

As a result a more ambitious scheme was decided upon, involving a larger design altogether, having approximately 3″ internal bore, and being capable of dealing with considerably greater volumes of aviation and motor spirit. Although these cables were physically much larger in dimensions and involved considerably greater weight of the order of 2,000 tons for each 35 miles nautical length, their manufacture was successfully undertaken and completed for operation at 1,000 lbs. per square inch internal pressure and this was later increased.

Many other major problems were involved in the successful completion of installations of this type, not the least of these being the production of suitable couplings. These couplings were required to connect individual lengths of cable together if necessary and also to be suitable to effect repairs in the cables should they become damaged as a result of accident or enemy action. Much careful testing and research was involved in the preparation of suitable designs but it is gratifying to record that all these problems were successfully resolved, in collaboration with other firms, making a complete installation possible.

Some idea of the colossal quantities of raw materials required for this vast project may be gathered from the fact that approximately 8,000 tons of lead, 5,500 tons of steel wire and strip, as well as large quantities of other material, were consumed. The transport and handling of these huge quantities under war conditions constituted a stupendous task in itself and great credit is due also to the suppliers whose splendid co-operation made these vital supplies available.

Many ingenious devices were necessary to enable these long and heavy cables to be shipped successfully on to the craft from which they were ultimately to be laid.

Henley's are proud of the fact that they were able to make the largest individual contribution to the successful production of cable of this type for operational purposes.

It was obvious from the outset that in order to be of the maximum value to the invading armies, these cables would have to be in position and capable of service as soon after D-Day as possible and the whole of the careful planning and concentrated efforts which had gone into the manufacture of the cables would have been wasted without the courage, initiative and resource of the crews manning the cable-laying craft who brought this remarkable venture to a successful conclusion. Their contribution is second to none in the whole story of a remarkable engineering achievement, as the success of the venture depended to a very large extent upon their coolness and courage in the face of enemy opposition.

The Defeat of the Magnetic Mine by Buoyant Cables

(*Continued from page* 905)

ingenious features. It had to be flexible, float on the surface of the water, and in addition contain a fairly large cross-sectional area of copper in order to carry the large current necessary to detonate the mine satisfactorily. The Henley design was achieved by mobilizing the combined resources of the Henley Cable factories and also of Henley's Tyre and Rubber Co. In peace-time the latter produced very large quantities of tennis balls, and the machinery for this purpose was rapidly adapted in order to make many millions of inflated cylindrical rubber elements, which, together with suitable reinforcement formed a buoyant centre on which the conductor wires and their insulation could be built, resulting in a cable of approximately 3½″ diameter.

During the war years many hundreds of complete sets involving over 1,000,000 yards of cable have been constructed and put into satisfactory operation. As time went on and the Admiralty were able to bring other types of vessel into service for this class of minesweeping, the types of buoyant cable supplied resolved themselves into three patterns, these used with :—

Fleet minesweepers.
Trawlers.
Drifters.

The main variant was not in the cable itself, but in regard to the length of cable employed, since these had to be modified to a considerable extent to suit the speed of vessel being used.

The combined resources of those firms which had been able to undertake this work initially was found to be insufficient to meet all requirements. Consequently, Henley's and Callender's, which had each developed satisfactory designs of cable based on the materials and facilities afforded in their own factories, were requested by the Senior Service to make available details of their designs to other interested cable makers on both sides of the Atlantic. This in the national interest was gladly done and resulted in a still further increase in the amount of buoyant cable available to the minesweeping service.

The production of the buoyant cable itself did not represent the whole story. Two lengths of cable, one short and one long, were used behind each of the minesweeping vessels in service. In addition, however, means had to be provided to enable the current in the conductor to leave and return in accordance with the stated requirements of the Admiralty. This involved the manufactures of large quantities of copper electrodes, which, together with the necessary fittings, gave Henley's Engineering Department plenty of scope for their ingenuity.

Miniature Buoyant Cable

In the early part of 1941 a further demand was received from the Admiralty for an entirely different type of buoyant cable. This was of much smaller sectional area, and required for an entirely different purpose. In this case Henley's were able to provide an answer within a few days, as it so happened that one of the original designs initially prepared for the main buoyant cable was readily adapted for the new application. In this case the elements were not employed but

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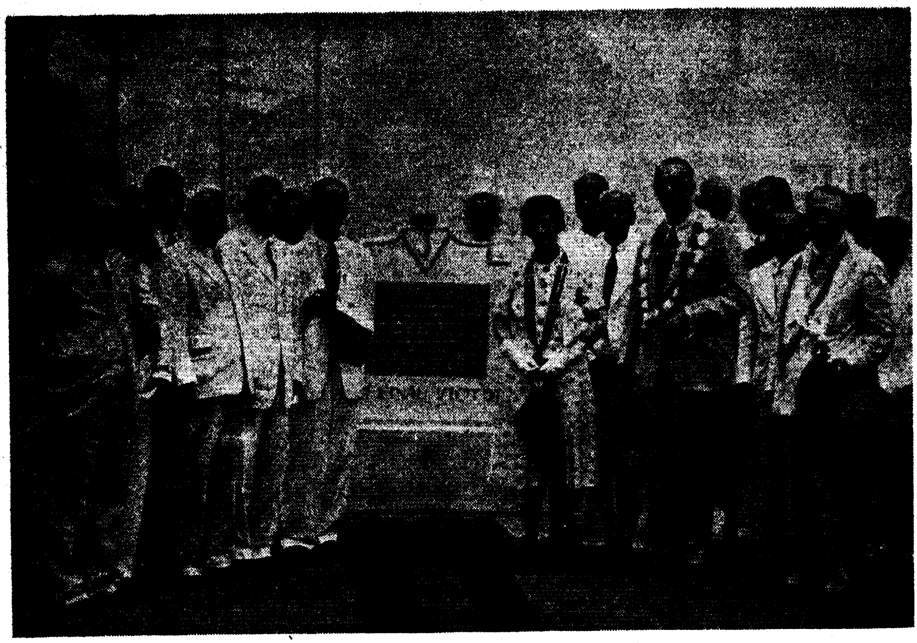

More Amenities for Millworkers

Foundation Stone of Maternity Ward Laid At Alagappa Nagar, Cochin

FURTHER steps in the matter of providing amenities to his employees were taken recently by Dr. Rm. Alagappa Chettiar, Managing Director, Cochin Textiles and Alagappa Textiles (Cochin) Ltd., with the laying of the foundation-stone of the maternity ward to H.H. Ravi Varma Hospital and the creche for the mills by Mrs. C. G. N. Edwards, wife of the Resident of Madras States. A large and distinguished gathering was present, including Lt.-Col. C. G. N. Edwards, Resident, Madras States; Sir George Boag, Dewan of Cochin; Mrs. Edwards, the Hon. Mr. P. V. Lonappan, Minister for Rural Developent; and a number of other official and non-official gentlemen.

The maternity ward will have eight beds and the construction of the ward, together with the creche, is estimated to cost about a lakh of rupees.

Dr. Chettiar, welcoming the guests, remarked that the hospital could not be complete without the maternity ward attached to it. The foundation-stone which was to be laid just now would mark another period of greater service to the employees of this mill and equally so to the people of the State. He then requested Mrs. Edwards to lay the foundation-stone.

Dr. Chettiar announced, in memory of "this Great Day of Celebrations," one month's salary as bonus to the workers and staff of the Mills and a pair of *dhotis* and *saris* to the workers. Dr. Chettiar also offered a donation of Rs. 1,00,001 to the Victory Memorial of Cochin State and the manner in which it was to be utilized would be settled in consultation with the Dewan and His Highness the Maharaja.

Sir George Boag, addressing a few words, hoped that the present enterprise would bring great relief and help to the women workers in times of suffering. He mentioned that the Cochin Government appreciated very much "the very great work Dr. Chettiar was doing for the welfare and benefit of the workers in

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tan the best
Picking Bands

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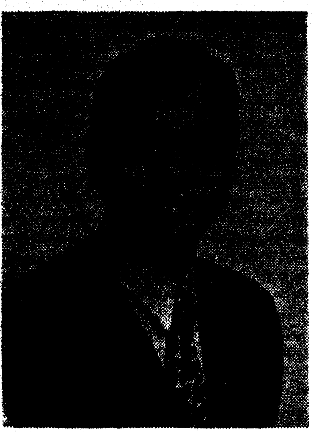
Progress of Rayon Manufacture

Its Possibilities in India Examined



Mr. Rasiklal J. Chinai is the Managing Director of the National Art Silk Mills, Ltd., Bombay, which is one of the leading mills producing rayon fabrics. He is also a partner in the well-known firm of Messrs. Nagindas Foolchand Chinai, who are among the largest importers of and dealers in silk yarn in India. As they are interested in starting a rayon yarn plant in India, Mr. Chinai was recently deputed to the U.S.A. to make preliminary investigations and establish contacts with leading rayon manufacturers with a view to arriving at some arrangement regarding technical and other help.

Addressing a meeting of the Silk and Art Silk Mills' Association, Ltd., Bombay, of which Mr. Chinai is a founder-director, he made a strong plea for the establishment of rayon manufacture in India. Mr. Ramdeo A. Podar presided.

The following is the text of the address:—

"RAYON, within a very short span of 30 years, from a small and doubtful beginning, has attained the position of leadership in the textile industry. The textile consumption of rayon in the United States has exceeded that of all other fibres except cotton in recent years. The following figures tell their own story:—

Year	*Cottons* Lbs.	*Rayons* Lbs.	*Wools* Lbs.	*Silks* Lbs.
1940	3,961,000,000	487,000,000	400,000,000	35,000,000
1941	5,207,000,000	586,000,000	652,000,000	25,000,000
1942	....	648,000,000	....	....
1943	5,258,300,000	656,200,000	628,000,000	....
1944	4,781,200,000	704,700,000	623,000,000	....

To-day America ranks first in the whole world not only as a rayon producer but rayon consumer as well.

"Six large producers, with 13 modern and well-equipped plants out of a total of 18, dominate U.S. production of viscose rayon with a production of nearly 88 per cent. of the total. These corporations have a strong and efficient management backed by ample finance, and supported by many exclusive rights for patents on machine and processes and efficient research staffs. They have shown, besides, a determination to hold their own and maintain the premier position in the industry. This industry is run there on aggressive lines but it is also very sensitive and alert. In that part of the hemisphere, you may be aware, an industrialist cannot afford to rest even for a while on his oars for fear of being beaten down in competition, much less a rayon manufacturer, for he has to improve his quality further and perfect it to withstand the competition of natural fibres like cotton, wool and silk, and at the same time, try to lower its cost. This he tries to do by increasing production and by incessant research, constant application and by inventing and providing himself with improved and up-to-date types of machinery. It is in this that there is some sort of rivalry among the different rayon manufacturers.

Fundamental and Applied Research

"The leading manufacturers over there are maintaining two departments to conduct their research work: the fundamental and the applied. The fundamental tries to find out methods of improvement in machinery to give better and increased production at lower cost while the applied attempts to develop new methods of improving and perfecting the product. They spend quite a lot to maintain these two departments. Some are seen to employ on high salaries as many as 250 to 300 expert engineers and chemists. They safeguard their interest by patenting their new discoveries either in machinery or in processes. The different manufacturers are also friendly to one another and have access to one another's factories. They also freely exchange information and notes. There are also instances where big rayon factories share, sell or exchange important patent rights with their brothers in the industry. There is very close co-operation between the rayon and machinery manufacturers which ensures the best for the industry. This sort of co-operation is not obtainable even in England and on the Continent where, it is understood, a rayon manufacturer is not even allowed to enter inside the rayon plant because of the fear that he would try to pry into the secrets of the manufacturer.

Beginnings of Rayon Industry

" About 30 years ago the rayon industry was the chosen field of a few in the United Kingdom and on the Continent. Naturally their secrets were very closely guarded and any attempts on the part of outsiders to learn and start the industry did not find much favour and encouragement with the pioneers. There was a cartel of four or five leading European manufacturers, viz., Courtaulds, Snia, Glanzstoff, etc., to protect their interests. But when America and, later on, Japan entered the field, their attempts to preserve it exclusively for themselves failed. The Americans started as pupils, by establishing concerns in the States with a tie-up or connection with the English and Continental concerns. Some paid royalties, others allowed participation in the capital and still others paid fixed lump-sum amounts for learning the processes and know-how. With the knowledge thus gained they made such rapid progress that to-day they are acknowledged leaders in this industry.

Manufacturing Processes

" Now I come to the production of rayon in the States. It is manufactured by three different processes: Viscose, Acetate and Cuprammonium. Out of 648 million pounds produced in the year 1942, 65 per cent. accounts for viscose, 29 per cent. for acetate, 2 per cent. for cuprammonium and the balance of 4 per cent. for nylon, vinyon, etc. While there are important chemical differences in these processes, they are all based on a common principle, namely, to break down natural cellulose and to reform it in a usable textile fibre which is still a cellulose or a compound of cellulose. About 80 per cent. of the world's production of rayon is by the viscose process. It is so cheap and so basically sound and time-tested and approved that in the last 30 years the succession of processing steps has changed but little. Flow sheets depicting the manufacturing procedure remain almost the same as they were in the infant stage of the industry. However, considerable improvements have been made in combining processing steps effecting important savings in time, materials and expenses. Mechanical refinements in production equipment, control by automatic instruments, etc., have attained a degree of refinement not found in many industries. It is in these mechanical improvements as also in the researches made from time to time to improve the quality and strength of the yarn which are in the main responsible for the rapid growth of this industry.

Viscose Systems

" In the viscose process itself there are three systems in use. The conventional methods use either the pot or the spool system. The pot system is very widely in use because of its advantages over the spool system. The third system, known as the continuous method, is used by the Industrial Rayon Corporation and was devised by them after some years of experimentation and is also patented by them. Among other plants I had the privilege of visiting the Painesville plant of the Industrial Rayon Corporation. This is said to be the latest and best plant in the world in the production of viscose rayon. In the chemical department, the new plant is essentially similar to other viscose plant. The building construction is of very modern design. As far as possible, it has been laid out to permit gravity flow. On the third floor of the chemical building, sulphite wood pulp sheets are treated in steeping presses with a solution of caustic soda. Handling of the pulp sheets to the presses and from the presses to the shredders is done by means of the overhead monorail carriers which are also used in dumping the alkali cellulose crumbs from the shredders to the ripening room below. On the first floor are jacketed xanthating churners to which the ripened alkali cellulose is conveyed through chutes by gravity. After the treatment with carbon bisulphide in the churns the contents are discharged through chutes to dissolvers on the ground floor in which the xanthate is dissolved in additional caustic soda solution. From the dissolvers the viscose flows by gravity to steel ripening tanks in the underground cellar beneath the spinning room. Here during the ripening period the viscose is filtered through several plate and frame filters, after which it is forced by air pressure to individual filter presses associated with each spinning machine. Up to this stage in all the three methods of viscose rayon production, there is no change.

"The spinning machines used in all the three methods differ: In the spool spinning method, the viscose is pumped through invisible holes in the spinnerettes. From the spinnerette the yarn passes in untwisted form through the coagulating bath on to a revolving spool. On this spool the untwisted yarn is thoroughly washed and dried, after which it is twisted. While twisting it is being transferred to another spool. From the second spool the yarn is reeled into skeins and in skein form is processed by being bleached, washed, etc. According to requirements, the yarn is delivered in skein form or wound on to cones on coning machines. The pot spinning method is very widely used due to its better quality and evenness of yarn produced than the spool spinning method. In this system the viscose solution is pumped through spinnerettes with invisible holes. Then the filaments pass through the coagulating bath to be led into a rapidly revolving pot. By the revolution of the pot and centrifugal force, the yarn is twisted in this process and coiled against the side of the pot to form what is called a 'cake.'

"In the old process which is still used by many British and European manufacturers, the cake is reeled into skein for further processing of desulphurizing, bleaching, washing, etc. But now the Americans have devised an automatic machine, where this cake from the spinning machine is placed and all the processes of desulphurizing, bleaching, washing, etc., are done. By using this method a lot of handling, breaking of filaments and loss of strength are avoided. In the Industrial Rayons' continuous process, the viscose solution is pumped through the spinnerettes and then the filaments pass through the coagulating bath. Then the thread is passed on from bobbin to bobbin, in all ten sets of them. During the passing on of the thread from one bobbin to another it undergoes all the processes of washing, desulphurizing, bleaching, lubricating, etc., and untouched by hand all these processes are performed within a few minutes. The machine is a bit complicated as all the processes must be synchronized to get the desired result. Any flaw in the chemical process is bound to affect the smooth working of the automatic spinning machine. The upkeep and repair charges are tremendously high. The only compensating advantages are saving in labour, evenness in quality and absence of knots in the yarn.

"I have closely studied all the three systems of manufacturing yarn by the viscose process to see which of them would suit Indian conditions best. I have come to the conclusion, after considering all the pros and cons, that the pot method would be most suitable for India. In a country like the U.S.A. where labour is paid 90/95 cents per hour, equivalent to Rs. 25 per working day, it would be worth while to install such kind of machinery for the continuous method of spinning. But in a country like ours where skilled labour can be had for Rs. 2 to Rs. 3 per working day, it is not worth while.

Rayon Weaving Progress

"In rayon weaving also the Americans lead the world. We are in line with the British or the Japanese rayon weaving mills. But we are all 30 to 40 years behind the American industry. They install the latest and most efficient types of machinery and all use automatic looms. A girl looks after 48 looms, depending on the denier of the yarn and the quality of fabric produced. In one of the mills I visited, a girl was looking after 40 looms on 100 denier georgette. Even with automatic looms they work with as high a speed as 172 picks per minute on 56" looms with an efficiency of 95 per cent. All the rayon weaving mills have air-conditioned building to maintain uniform temperature and humidity. The quality of the American rayon yarn is excellent and very strong. Even their rejected quality is far superior to the first quality Japanese yarn. The warping machine runs at 300/400 yards p.m. with 800 ends magazine creel and the yarn is so strong that in 10,000 yards there are hardly one or two breaks. Unless we are sure of getting the same quality of yarn as is used by the Americans, we in India may not be able to run automatic looms efficiently. As the wages are very high in the States they concentrate their attention on reducing the manufacturing cost by installing automatic machinery to eliminate labour as far as possible, install higher speed and efficient machines, improve processes and efficiency of workers and by installing larger units. Almost all the cotton and rayon mills have transferred their entire machinery from the States of New England, Pennsylvania and New Jersey to the Southern States where labour is comparatively cheap and the taxes are low.

" The approximate installed annual capacity of individual viscose rayon yarn plants, not including staple fibre of average size, approximated 17,000,000 lbs. The total production and value of rayon and staple fibre in 1942 was as under:—

	Lbs.				
Staple fibre	153,000,000	at 25 cents	=	U.$	38,250,000
Viscose rayon	298,000,000	at 58 ,,	=	,,	172,840,000
Acetate rayon	169,000,000	at 73 ,,	=	,,	132,130,000
Cuprammonium	12,000,000				
Total	632,000,000			U.$	343,220,000

The gross sales were about U.$351,000,000. The industry yielded a gross profit of U.$119,000,000 or nearly 33 per cent. on the sales volume in 1942, equivalent on an average of 19 cents per lb. as against 16 cents in 1941 and 15¾ cents in 1940. The average production per day per employee was 30 lbs. in 1942 as against 12 in 1928-29 and the average wage in the industry in 1942 was 85 cents which to-day is 90/95 cents per hour or Rs. 25 per working day.

" At present in the States there is acute shortage of rayon yarn for civilian use. This is due to many causes; nearly half is allocated for the manufacture of high tenacity rayon tyre cord yarn. The result has been that the rayon fabric mills are not working to full capacity, about 50 per cent. of the looms are on rayon and the balance on cotton. America was importing from Japan and China about 30,000 to 40,000 bales of raw silk per month, mostly for the use of hosiery and underwear. This is cut off and replaced by rayon. Viscose rayon tyre cord fabrics as proved in this war have a great many advantages. The new high tenacity rayon yarn is very suitable for use either with natural or with synthetic rubber. Less rubber is needed than with other yarns and because synthetic rubber heats up more quickly than natural rubber the viscose rayon helps to offset this disadvantage. Rayon tyre cord fabrics stand up to tremendous punishment. A very strong yarn, it withstands the terrific brushing inherent in the sudden stop of bomber wheels and it takes the grind of heavy truck traffic. So a new field has been opened for the use of rayon even after the war is over. The quantity taken over by the defence purposes constitutes more than half or roughly about 380,000,000 lbs. in 1944, out of 700,000,000 lbs.; the balance of 320,000,000 lbs. was made available for civilian use, including 5 per cent. reserved for export to South American countries to promote good-neighbourly policy, and this alone comes to about 16 million pounds per year.

Possibilities in India

" Now I come to this trade and industry in India and the possibilities of starting a rayon factory here. The imports of rayon in 1923-24 were about 400,000 lbs. It rose to 37,500,000 lbs. in 1939-40, valued at Rs. 2,64,00,000. Besides, some 54,000,000 yards of piecegoods, made purely of rayon, valued at Rs. 2,10,00,000 were also imported, and taking the average yardage to a pound at 5, the piecegoods imported in terms of the weight would amount to 10,800,000 lbs. Thus the total consumption of rayon into India in that year amounted to 48,300,000 lbs., valued at Rs. 4,74,00,000 roughly. In this reckoning, the several millions of yards of piecegoods made of rayon mixed with other materials are not taken into account. If we had an industry of our own, so much money which has been practically drained out of the country would have been saved and put to better use for the benefit of the country as a whole. It is really amazing that when we have a very highly developed textile industry, no one should have thought of starting this allied industry and if we do not bestir ourselves and start betimes manufacture of rayon yarn in India, I am afraid the position in this country will be the same as we have experienced during the war period when we had to close down so many of our power and handloom factories which were run on it for want of adequate supplies. Even during the post-war period, there are less chances of getting supplies from Italy and Japan who were our principal suppliers in pre-war days, as their plants must have been damaged beyond repair. England is comparatively a small producer, while America has to meet a very large demand of her own in the domestic field and also has to cover the neighbouring South American and Mexican markets, which consume a lot of fibre. It is a short-sighted policy even then to sit tight and think of depending upon foreign countries for the supply of this commodity. I think this the most opportune moment for starting it. Even industrially backward countries like Greece, Brazil, Spain and Chile, etc., have their rayon plants and certainly we should have not one but at least five or six with a daily capacity of 50 to 60 tons.

"Let me now examine whether rayon manufacture would succeed in India. Many post-war industries are being planned for India. We have all the requisites to make the rayon industry in India industrially and commercially successful. The raw materials required can be had in plenty, labour is cheap, and these two will keep the production costs to the minimum, and we have a ready market for it in our own country, unlike other countries, except, perhaps, America.

"The chief raw material that is required for its use is sulphite wood pulp. Until such time somebody starts manufacturing this kind of pulp from the pine and spruce trees found growing in the Himalayan valleys, it will have to be imported from Scandinavia, Canada and America, where it is manufactured also from pine and spruce trees. In times of emergencies like the present one, it can be switched over to chemical cotton made out of short-staple cotton. But this chemical cotton even in normal times costs much more than the sulphite wood pulp. In the beginning, one should not burden the industry with potential raw materials like bamboo, grass, etc., which may prove in the end very costly, giving a lot of headaches in the attempt. It is, therefore, advisable to use only reliable, known and time-tested raw materials like sulphite wood pulp or chemical cotton. Even paper pulp prepared from pine or spruce for high grade paper is not suitable for rayon, because paper pulp requires only physical properties with high cellulose contents while rayon pulp requires chemical properties with constant and rigid specifications and high alpha cellulose contents. In the States they also use chemical cotton made from cotton linters, which is undoubtedly cheaper than short-staple cotton. Short fibres that cling to the cotton seed are cut, which is known as linters. The supply of linters in large quantity in India is yet not developed and at present is negligible, because we have as yet not reached that stage in our industrial development for assessing proper values for such raw materials. In America they have various uses for linters; besides making linters pulp for rayon, it is used in the plastic industry and for explosives. For manufacturing rayon in the States, they largely use sulphite wood pulp because it is cheaper and pulp manufacturers have developed a high grade rayon wood pulp with very high alpha cellulose contents the quality of which is equal to linters pulp. The cost of short-staple cotton even in normal times was As. 3 to which should be added another As. 1-6 to convert it into chemical cotton which makes the total of As. 4-6 per lb. of chemical cotton, as against As. 2-6 per lb. for the imported sulphite wood pulp. However, there is a potential supply of linters in large quantity from saw-ginned Punjab-American cotton which would possibly be available at As. 1-6 per lb. In that case linters pulp could be produced at As. 3 per lb.

"All the important chemicals required in the manufacture of rayon are available in India, except carbon bisulphide. Of these, sulphuric acid and caustic soda are most important and these are available in sufficient quantity. Carbon bisulphide being highly volatile, it is better to manufacture it on the spot. This is simple: by burning charcoal with sulphur in Taylor furnace, carbon bisulphide is manufactured.

"Labour will not be a problem in rayon manufacture. Of course, all hands will have to be trained. Very few workers are required, as most of the operations are automatic. Unlike the motor car or airplane factory, no overall high degree of individual skill is required. The success of the plant will mainly depend on a few engineers, supervisors and chemists. Rigid control is required on correct temperatures, time and chemical mixtures. In a factory having a capacity of 10 tons a day, about 550 workers are required. But most of these are not required in the actual plant but in the subsequent processes in the winding, coning, sorting and packing departments for which trained men in cotton and silk mills are available.

"Water is another important thing in the manufacture of rayon. About 150 gallons of water is required to manufacture one pound of rayon. This water must be pure and soft and free from iron and iron salts which are harmful to rayon.

''Another thing that contributes to the success of the industry is the selection of a good site. It must be within easy distance from the market and easily accessible by the railway line and also by trunk road. It must have an unlimited supply of water and cheap hydro-electric power for use and also provide for making arrangements for the chemically contaminated water to flow into a nearby river or creek. The site must be suitable also for housing the labour and to provide for their amenities and needs.

"But the most important of all in the manufacture of rayon is the know-how and the secret processes, as also the possession of patent rights acquired by leading rayon manufacturers after long and incessant experimentations involving high cost in their fundamental and applied research departments. There are only a few rayon manufacturers who know the technique and art of manufacturing rayon. The success of the plant will mainly depend on the correct designing of the plant and acquisition of these secret processes, know-how and patent rights.

"The existing customs duty of As. 5 or 25 per cent. *ad valorem*, whichever is higher, plus a surcharge of 20 per cent. gives ample protection to the local industry. The estimate of production costs shows that there are very good chances for this industry and it can easily hold its own against any foreign competition. In the case, however, of any foreign country trying to subsidize its exports to India or dump rayon in this country; the Government can be persuaded, I think, to protect the industry."

More Amenities for Millworkers

(*Concluded from page* 908)

the mills," and he hoped other employers of labour would emulate Dr. Chettiar's example.

Lt.-Col. Edwards expressed his great sense of pleasure on behalf of himself and Mrs. Edwards for the opportunity they had to pay a visit to Alagappa Nagar and to associate themselves in the celebration of such a memorable occasion. He added that it was men like Dr. Alagappa Chettiar who help them to realize that industry did not mean poverty of the masses nor will it mean filth, squalor and dirt. A visit to Alagappa Nagar and its surroundings would convince one that industry could be carried on in the most congenial surroundings of garden, beauty and flowers and all those values in life which make life worth living for the common man.

Mrs. Edwards laid the foundation-stone with a silver trowel. Mr. Thomas Kallukaran, Welfare Officer, proposed a vote of thanks. The function concluded with a lunch.

The Staff Club, Cochin Textiles, held a meeting in honour of Dr. Rm. Alagappa Chettiar on the terrace of the Ravi Varma Hospital in the Mills compound. Eulogistic references were made to Dr. Chettiar's services to his employees in several ways. Dr. Chettiar replied suitably. Mr. R. Ramanuja Iyengar, Manager, Cochin Textiles, got up an enjoyable dinner in honour of Dr. Alagappa Chettiar.

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Picking Bands

AGENTS

Election of Workmen's Director

Delhi Cloth Mills' Distinction

Mr. Mamchand
Labour Director for 1945-46

UNDER Articles 83 (*a*) and (*b*) of the Articles of Association of the Delhi Cloth and General Mills Co., Ltd., which employs about 20,000 permanent workers in its factories, there is a provision for the appointment of a director who is elected from amongst the workmen of the company. It is believed that this is the only concern in Asia which has its employee on the Board of Directors.

The pictures published below show the election in progress, in which Mr. Mamchand, a worker in Spinning Mills No.3, was duly returned as director.

An old worker drops the voting paper in the ballot box.

Female workers receiving voting papers

OUR PERSONAL COLUMN

Dr. Percy Dunsheath, O.B.E., M.A. (Cantab), D.Sc. (Eng.), F.Inst.P., M.Inst. C.E., M.I.E.E., Director and Chief Engineer of W. T. Henley's Telegraph Works Co., Ltd., England, has been elected President of the Institution of Electrical Engineers, England.

Dr. Dunsheath has had a distinguished career with Messrs. W. T. Henley's Telegraph Works Co., Ltd., joining the company in 1919 for the purpose of reorganizing the Research Department. He has been responsible for many improvements in the design and manufacture of electric cables, particularly in the supertension field, and in 1924 was awarded the medal of the Royal Society of Arts for a paper on " Science in the Cable Industry."

Dr. Dunsheath was appointed Research and Technical Manager of Henley's in 1929. In 1934 he was appointed Chief Engineer and was elected a Director of the Company and of its subsidiaries, Henley's Tyre and Rubber Co., Ltd., and the Holborn Construction Co., Ltd., in 1937.

He has held office twice as member of the Council of the I.E.E., serving as Chairman of the Transmission Section 1936-37, and as Vice-President, 1940-43. In 1942 he was appointed Chairman of the Research Committee which office he still holds, and was reappointed Vice-President in May 1945. He has been awarded the Kelvin Premium, the John Hopkinson Premium, and various extra premiums. He is President for the 1945-46 session.

Dr. Dunsheath's interests in the many important problems of education, particularly as far as they relate to industry, are well known. With the Henley organization he initiated some years ago a comprehensive educational scheme for junior employees, and, as evidence of his interest in a wider field, he is Vice-Chairman of the Governors of Woolwich Polytechnic, member of the Council of the British Association for Commercial and Industrial Education and of the Standing Committee of Convocation of London University. Among the many engineering and scientific bodies with which Dr. Dunsheath is associated are included the Institution of Civil Engineers (member), the Physical Society (Fellow), the Institute of Physics (Founder Fellow), F.B.I. Research Committee (member), Royal Institution (Vice-President 1945). He is the author of many papers and articles on electrical engineering, physics, the organization of research and education in industry.

In 1927 Dr. Dunsheath visited the U.S.A. as a delegate of the International Electro-Technical Commission, and has served on many Technical Committees, both British and International.

Dr. Dunsheath has made several important engineering contributions to the war effort, one of the most outstanding of these being the development of buoyant cables for sweeping magnetic mines, utilizing cylindrical " tennis balls " to form the buoyant centre of the cables.

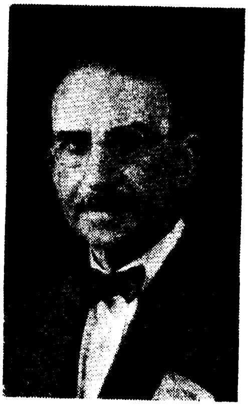
It is of interest to record also that Dr. Dunsheath was the pioneer of the continuous extrusion process for producing lead pipe and the inventor of the first machine to operate successfully on this principle.

Mr. W. N. Ireland has been appointed Chief Mill Planning Engineer of Platt Bros. & Co., Ltd., and Textile Machinery Makers, Ltd., England, in succession to Mr. J. Buckley, who has joined L.C.C. Mr. Ireland is held in great esteem among textile machinists and cotton mill-owners and managers. He was one of the young men trained up with Mr. Harold Hill, and spent 20 years with Dobson and Barlow. Since the individual machinery firms formed T.M.M. he has been with Howard and Bullough for twelve years. His wide knowledge of cotton machinery and yarns, from the coarsest to the very finest counts, will be at the disposal of the trade.

Mr. H. Kenyon was re-elected Chairman of the Export Section of the Cotton and Rayon Merchants' Association, Manchester, at a meeting of the Executive held on Thursday, 19th July, 1945.

At a meeting of the Council of the Cotton and Rayon Merchants' Association, Manchester, held on Wednesday, 11th July, 1945, **Mr. H. P. Bardsley** was elected Chairman in succession to Mr. E. A. Carpenter, who has occupied the chair for the past three years.

Mr. E. A. Carpenter was elected Deputy Chairman and **Mr. C. E. Coates** was elected Honorary Treasurer.



A hearty send off was arranged on Friday the 24th August in honour of **Mr. James R. Riley**, the Manager of the Commercial Ahmedabad Mills Co., Ltd., Ahmedabad, on his retirement, Sheth Ratilal presiding. Mr. Thakore, the Secretary of the mills, congratulated Mr. Riley on his long and continuous service in the same mills for 30 years. Sheth Ratilal expressed his deep regret at Mr. Riley's retirement as Mr. Riley, on account of his long service and candid advice, was part and parcel of the firm of Messrs. Trikumlal Bhogilal & Co. Mr. Riley thanked the management and all workers associated with him for their co-operation during his services.

Previous to coming out to India Mr. Riley worked at Messrs. John Hawkins and Sons, Green Bank Mills, Preston, The Highfield Mills Ltd., Nile Spinning and Doubling Co., Oldham, and Messrs. Joshna Hoyles and Sons, Beech Mill Bacup. He left the latter place to come out to India as carding and spinning master for the late Sir Chinubhai Madhavlal, Bart., Shahpur Mills, Ahmedabad, in 1912. Since that year Mr. Riley worked as a spinning master and manager in the Commercial Ahmedabad Mills for a period of about 30 years.

Mr. K. S. Ramrao, the Weaving Master of the mills, has taken over charge as Manager in the place of Mr. Riley.

Mr. Ratilal M. Nanavati, Managing Director, Kantawala Nanavati & Co., Ltd., Bombay, President of the Textile Stores and Machinery Merchants' Association, left Bombay for Karachi *en route* to the United Kingdom and the U.S.A. on 10th September 1945. During his stay abroad, he will explore the possibilities of developing India's import trade in textile machinery and auxiliaries.

Indian Delegation to I.L.O. Conference.—The Government of India have nominated the following delegation for the forthcoming International Labour Conference meeting on 15th October 1945 at Paris:

Government Representatives.—Sir Samuel Runganadhan, High Commissioner for India (delegate and leader); Mr. H. C. Prior, Secretary, Labour Department (delegate); and Mr. D. R. Pradhan, Regional Director of Resettlement and Employment; Mr. D. G. Jadhav, Regional Labour Commissioner, Southern Zone; Musabih-i-Khas Bahadur Capt. Harish Chandra Dhanda, Commerce Minister, Holkar State, and Mr. R. S. Mani, I.C.S., Secretary, Publications Department, High Commissioner's Office, London, as advisers.

Employers' Representatives.—Mr. Lakshinivas Birla (delegate); and Mr. David S. Erulkar, Mr. A. W. Taylor, Lala Kirpa Narain, Mr. S. P. Ogale, and Mr. Ramlal Sonkar, advisers.

Workers' Representatives.—Mr. N. M. Joshi (delegate); and Mr. S. S. Mirajkar, Mr. Abdul Momin, Mr. R. A. Khedgikar, Mr. P. R. K. Sharma and Mr. R. B. More, advisers.

Mr. G. T. Dow Smith—His Majesty's Senior Trade Commissioner in India announces that Mr. G. T. Dow Smith has been appointed by the Board of Trade, London, to be His Majesty's Trade Commissioner at Calcutta.

Mr. Dow Smith saw military service in the 1914-18 war after which he was a member of the headquarters staff of the Board of Trade. He subsequently held an appointment in the British Trade Commissioner's Service at Nairobi and Bombay and had been acting British Trade Commissioner at Calcutta since February this year.

Obituary

Mr. James Robinson

Textile industrialists all over India will learn with deep regret of the death, in his 77th year, of Mr. James Robinson, Senior Director of Messrs. Mather and Platt Ltd.

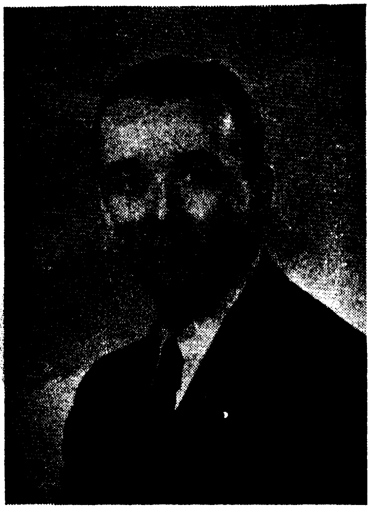
After leaving the Manchester Grammar School he entered the works of the firm as an apprentice over sixty years ago and eventually became Managing Director of the department responsible for the production of bleaching, dyeing and finishing machinery. In this branch of the industry he achieved a unique position. All over the world—and there was no textile producing country which he had not visited—he was recognized as an authority and was frequently consulted. He was a member of the Post-war Industrial Reconstruction Committee (Manchester Group).

Mr. James Robinson

It is many years since Mr. Robinson visited India, but right up to the time of his death the interests of India's textile industry held a foremost place with him and many leaders of the industry in this country will remember the sound advice and generous help he had always so willingly extended to them.

Mr. Z. G. Bielsky

It is with sincere regret that we heard the cabled news of Mr. Z. G. Bielsky's death on 9th September, following an accident which occurred in the Power House of his principals, Messrs. Brown Boveri & Co., Ltd., in Baden, Switzerland. Mr. Bielsky was born in 1904, and took his Engineering degree in Switzerland. He joined his employers to be first active on the test bed and subsequently to travel all over the Continent and Great Britain as one of their test engineers. He came to India in October 1934 as a technical expert attached to Messrs. Volkart Brothers, his principals' representatives in this country. Wherever he went, on business or leisure, this gifted engineer, and his wife, immediately made friends and they were very happy in India. They had left Bombay in February to spend a well-earned leave and see their daughter after nearly seven years' separation, and Mr. Bielsky was to have returned shortly to Bombay. During his ten years' activity in India, Mr. Bielsky was connected mainly with the industrial development, being responsible for the installation of power plant in public utilities, textile mills, cement factories and railways. During the war he contributed in no small measure towards keeping their plants in commission when difficulties arose. Many friends in business and industrial circles will miss his unfailing cheerful response to their frequent calls for information and assistance, and all will remember him gratefully as a good and sincere friend.



Cotton Piecegoods Quotas Revised

Bombay Conference Decision

AN agreement over the quotas of cotton piecegoods for various provinces in British India and Indian States was reached at a conference of the representatives of various Governments convened in Bombay by the Textile Commissioner, on Thursday the 6th instant. The new quotas, which received the unanimous support of the Conference, will be put into effect on 1st October, and the position will be reviewed at the end of each quarter thereafter in the light of the supply position. Sir Akbar Hydari, Secretary to the Government of India, Department of Industries and Civil Supplies, presided.

The revised quotas make no difference to the population in Bombay and the Punjab. The supply to these two provinces will be maintained at the present level which was considered to be too high by certain other provinces. On the other hand the quotas have been raised in the case of other provinces. The increase varies from 20 per cent. to 35 per cent. of the present allotments. For instance, the United Provinces have been allotted a quota in order to ensure 13½ yards per head of the population in the province as against the present basis of 10 yards per head.

The liberal allotment of quotas under the new scheme has, it is understood, been rendered possible by the increase in the overall supply position to the tune of some 900 million yards for the civil population. Following the introduction of the utility cloth scheme, the output of the Indian cotton mill industry has gone up by seven per cent., while saving has been effected by curtailing the export quota and by reducing the demands of the Defence services.

The utility cloth scheme is likely to be continued for a fairly long time. Inquiries made in this connection reveal that the chances of getting substantial imports of cloth from abroad in the near future are slender. On the other hand, the increase in the population and its purchasing power will require larger supplies of cloth. The gulf can be met, it is stated, only by increasing the domestic production which, in turn, can be achieved only by manufacturing utility cloth.

Rationing at Work in Bombay

Cloth Ration Cards

AS already announced, persons who hold permanent ration cards in Bombay City and the Bombay Suburban District issued on or before 31st August 1945 can register them up to 30th September 1945, for obtaining rationed cloth. The concession is also available to persons residing in establishments on 31st August 1945, or receiving service rations up to that date. If such persons fail to apply for registration in time, they will have to wait until 1st December 1945.

Ration cards issued on or after 1st September 1945, can only be registered for purchasing rationed cloth three months after the date of issue. Similarly persons coming to reside in the rationed area on or after that date and claiming registration by reason of residence in an establishment or receipt of service rations will be entitled to apply for registration only after they have completed the minimum period of residence of three months.

Cloth for Expectant Mothers

Expectant mothers in Bombay City and the Bombay Suburban District will get a permit for 7½ yards extra cloth for themselves and 7½ yards in advance for the child only after completing six months of pregnancy, according to an amendment to the Bombay Cloth Rationing Order, 1945. Applications in C-9 forms should, therefore, be made only after completing that period. No *dhotis* will be available on such permits and not more than one *sari*. Other varieties will be available subject to the maximum obtainable in each.

The amendment to the order has been published in the *Bombay Government Gazette Extraordinary* of 30th August 1945, says a Press note issued by the Government of Bombay.

CHANGE OF RATION CLOTH SHOPS

Government Afford Facilities

It has been decided to allow change of rationed cloth shops in Bombay City and the Bombay Suburban District from 1st September, says a Press note issued by the Public Relations Officer (Rationing), Bombay. This concession will be operative only in the month of September, i.e., no change will be allowed either prior to 1st September or after 30th September and not more than one change will be allowed. The shop to which it is proposed to transfer should also be in the same ward or area in which the present shop is located and transfer to shops located in other wards will not be allowed.

Persons intending to change their shop should apply in C-12 form. They should first find out from the shop to which they desire to transfer their cloth registration sheet whether it has got a vacancy or not and get the form duly endorsed by the owner of that shop in case there is a vacancy. The form should then be presented along with the foodgrains ration cards of all members of the family or the certificate of eligibility as the case may be, to the Rationing Inspector posted at a central shop for a group of three or four shops (the rationed cloth dealer to whom the transfer is sought will tell the applicant where exactly the inspector is sitting). After necessary scrutiny, the inspector will return the ration cards or the certificate of eligibility as the case may be and retain the cloth registration sheet of the applicant. On or after the date mentioned by the inspector on the counterfoil of the C-12 form, the applicant will get back the registration sheet from his new rationed cloth dealer and his transfer to that dealer will also become effective from that date.

New Ration Cloth Shops

The following new rationed cloth shops have been opened in F (South), F. (North) and G. (North) Wards: Jawahir Store, Parel Tank Road (B/85); Mathura Stores, 15, Bhiwandiwala Building, Matunga, (G.I.P.) (B/286); The Deccan Cloth Stores, Lady Jamshedji Road, Dadar (B/287); Shevantilal Chimanlal, Madhavji Dharamsi Building, Foras Road (B/296); Umedmull U. Kaji, King Edward Road, Sewree (B/297); New Perbhadevi Cloth Stores, Perbhadevi (B/298). Those who have not yet registered their cards for the purchase of cloth because registration in the existing shops was over can now register their cards at any one of these shops.

For refusal to sell rationed cloth, which they had in stock, to their registered customers, Rs. 500 each have been forfeited from the deposits of two B class rationed cloth dealers in Bombay City. Similar action was taken against one A class and two B class dealers some days ago.

Fresh certificates of eligibility for the purchase of rationed cloth in Bombay City and the Bombay Suburban District will be issued on application and payment of a fee of 2 annas in case such certificates already issued (to residents of establishments, etc.), are lost, defaced or destroyed. Applications should be made at the Rationing Office of the ward or area in which the applicant's rationed cloth shop is situated.

PIECEGOODS PLAN FOR BENGAL

New Association To Be Formed

A new body to procure and distribute piecegoods in Bengal is to be set up under the terms of an Ordinance issued recently. The body will be known as the Bengal Textile Association.

The Ordinance is the result of an agreement reached during discussions in Calcutta last month between Sir Akbar Hydari, Mr. Krishnaraj Thakersey, Chairman of the Textile Control Board, Mr. Vellodi and the Bengal Government, Chambers of Commerce and others for the amelioration of the cloth position and to bring all interests concerned under the co-operating umbrella.

Following this agreement, the Central Government have arranged to release in addition a stock of 10,500 bales of cloth to Bengal to give rationing a fair start.

The Ordinance provides for the Bengal Textile Association to function as a trading corporation with a Board of Control of nine members and an executive committee of 26 members; and to raise subscriptions from constituent members of the Association according to the prescribed scale.

The Association will be under the general control of the Bengal Government, and it can be dissolved by a notification under the Ordinance with three months' notice.

Membership of the Association is open to all wholesale dealers who were engaged during any one year between 1st January 1940 and 31st December 1944, in wholesale business of piecegoods in Calcutta, who can prove having purchased "otherwise than directly from manufacturers" and sold wholesale in Calcutta a quantity of piecegoods not less than the prescribed minimum.

The membership is also open to present "authorized dealers" if certified to have discharged their obligations.

The minimum subscription, upon acceptance, is Rs. 15,000, but those who can prove higher turnovers are eligible to a maximum subscription of Rs. 60,000.

The Ordinance provides that the Board of Control, including the Chairman and the Vice-Chairman, will be appointed by the Central Government. The executive committee will be formed of 17 other members in addition to the nine members of the Board of Control.

It is understood that the Ordinance has been promulgated by the Central authority at the request of Bengal Government as trading corporations are outside the power of the provincial legislature. However, by a separate order under Section 124 of the Constitution Act, the Government of India with the consent of the Bengal Government are entrusting all powers under the Ordinance to the latter, subject to the general control of the Government of India.

Government Ordinance Welcomed

Welcoming the Bengal Textile Association Ordinance promulgated by the Central Government, Dr. B. C. Roy states: "It is now possible to get all the principal communities in Bengal to join in having an association composed of non-official members representing different interests in the province, and who are also interested in the cloth trade."

The new Ordinance gives powers to the Government of Bengal to procure and distribute cloth through the Association.

Dr. Roy says: "It is obvious that the continued distress in Bengal was due as much to the difficulty in procuring cloth as in the distribution of it in different areas.

"The Director-General of Cotton Textiles would act as the representative of the Government of Bengal on the association, but it is important to ensure that this association will be primarily a non-official body interested in the textile trade, and in seeing that cloth is distributed to all parts of Bengal at the earliest opportunity.

"This association is to work through a governing body, and I was informed in Calcutta that the proposal was to have a governing body consisting of representatives of Hindus and Muslims resident and trading in Bengal and of the Marwari and Gujerati communities."

TAILORING CHARGES FOR MEN'S SUITS

Further Reduction

Making charges for men's lounge suits consisting of trousers, waistcoat and single-breasted coat and also for men's coats, trouser and waistcoats separately, which may be charged in addition to the cost of the material by dealers who sell ready-made garments or who make and sell garments to order, have now been revised downwards by the Central Government by a notification published in the *Gazette of India* recently. The notification also specified making charges for men's overcoats, sherwanis or achkhans and cotton shirts.

Some of the revised making charges permissible to such dealers are as follows: For men's woollen lounge suit consisting of trousers, waistcoat and single-breasted coat Rs. 30, Rs. 40 (B Class), Rs. 80 (A Class); for palm beach, silk or half wool half silk men's lounge suits of three pieces as above Rs. 20, Rs. 35 (B Class), Rs. 60 (A Class); for cotton lounge suit of three pieces as above or lounge suit of any other material not included in the foregoing categories Rs. 10, Rs. 20 (B Class), Rs. 30 (A Class). For woollen sherwani or achkhan the making charges are Rs. 24, Rs. 33 (B Class), Rs. 70 (A Class); for palm beach, silk or half wool half silk sherwani or achkhan Rs. 18, Rs. 30 (B Class), Rs. 52 (A Class); and for cotton sherwani or achkhan Rs. 8, Rs. 17 (B Class), Rs. 25 (A Class); for cotton shirts the charges Re. 1, Rs. 2-8 (B Class), Rs. 4 (A Class). For shirts with half sleeves the charges shall be reduced by 12½ per cent.; for each separate collar the making charges shall be 12½ per cent. of the maximum making charges for a shirt.

The making charges specified above mean the amount which a dealer may add to the cost of the material in order to determine the maximum retail price of the finished garment and they include the cost of the labour employed in making the garment, the cost of lining, buttons and such material as is used in the making of the garment other than the principal cloth out of which the garment is made.

Prices of Raw Silk

The maximum selling prices chargeable by a producer or dealer in respect of filature raw silk of the trade descriptions International 'C,' 'D,' 'E,' and 'F', Delhi, Delhi 'G' and Delhi 'X' produced in the Madras Presidency, Mysore State and Bengal Province were recently fixed by the Central Government at Rs. 40-8, Rs. 40, Rs. 39-8, Rs. 39, Rs. 38-8, Rs. 38 and Rs. 37-8 respectively per lb. ex-filature and Rs. 44, Rs. 43-8, Rs. 43, Rs. 42-8, Rs. 42, Rs. 41-8 and Rs. 41 respectively per lb. in other cases. These maximum prices have now been made applicable to filature raw silk of the same trade descriptions produced in Kashmir State also, according to an amending notification published in the *Gazette of India* dated 4th August 1945.

The maximum selling prices of *charka* raw silk of various descriptions produced in the Madras Presidency, Mysore State and Bengal Province were also fixed by the earlier notification mentioned above.

Export of Cottonseed

The Government of Bombay have issued an order cancelling previous orders banning the export of cottonseed in excess of 20 seers by rail, road or river, from any place within the limits of the Kaira and Ahmednagar Districts to any place in India outside, except in accordance with the conditions of a licence granted by the District Magistrates of the respective districts. The notification is published in the *Bombay Government Gazette* dated 16th August.

The District Magistrates of these districts have simultaneously issued orders banning the export of cottonseed from their respective districts except under and in accordance with the conditions of a licence granted by them.

Complaints Against Mills

Complaints from deficit zones against the dumping of dyed and coloured cloth by Ahmedabad mills are increasing. They demand a 50 per cent. cut in the prices of dyed and coloured cloth to dissuade the mills from manufacturing it to the exclusion of grey and bleached cloth, the shortage in which varieties is getting acute throughout the country. With the cessation of war with Japan prices of so-called ready-made cloths have declined; but till they are controlled like ordinary cloth they will not cease diverting ordinary cloth from the regular trade channel to the black market.

Progress in Bihar

3,394,846 and 2,407,934 yds. of standard cloth were received and sold respectively in Bihar in May 1945.

The total quantity of mill-made cloth including standard cloth despatched to Bihar during May 1945, from the main producing centres outside the province was 27,328,500 yds. against a monthly quota of 26,757,000 yds. (based on 10 yds. per head of the population per year).

Fifty-eight cases for the contravention of the provisions of the Cotton Cloth and Yarn (Control) Order, 1943 and the Bihar Cotton Cloth and Yarn Dealers (Licensing and Control) Order 1944, were instituted in May 1945, bringing the total of cases instituted from the beginning of cloth control to 638. Sixty-six cases were disposed of during the month, bringing the total of cases disposed of from the beginning to 411, 10 cases resulted in conviction and 12 in acquittal and in 44 cases the accused were discharged or the charges against them were withdrawn in the month. The total corresponding figures from the beginning of the cloth control are 20,793 and 111 respectively.

One hundred and forty-seven licenses under the Bihar Cotton Cloth and Yarn Dealers (Licensing and Control) Order, 1944, were cancelled otherwise than on conviction in May 1945, bringing the total of licences thus cancelled from the beginning to 881.

Textile Industry (Control of Production) Order

The Central Government have by a notification published in the *Gazette of India*, dated the 11th August 1945, promulgated the Textile Industry (Control of Production) Order, 1945. This Order is a *verbatim* reproduction of the Order promulgated in May 1945 which has now been repealed. All orders and notifications issued under the old Order should be deemed to have been issued under the new Order. Among other things the Order restricts the production of yarn by a manufacturer to certain specified counts and provides that no manufacturer shall utilize less than 90 per cent. of his entire weaving energy per month for the production of utility cloth such as *dhotis*, *saris*, longcloth, shirtings, drills, twills, sheetings, etc. The use of folded yarn in the production of cloth is restricted under the Order, while the production of any cloth with a border exceeding 2" in width is totally prohibited. The varieties to be manufactured by a producer are also restricted. Besides, every manufacturer is required to submit to the Textile Commissioner returns in such form and at such times as he may specify.

Starch Control Order

The Starch Control Order, 1943, has been repealed and substituted by the Starch Control Order, 1945, promulgated by the Central Government and published in the *Gazette of India*, dated 4th August 1945. The Order provides that no person shall manufacture starch from potatoes or from any foodgrain other than tapioca except under and in accordance with the terms of a licence granted by the Starch Controller. It further provides that no person can buy or sell starch except under a general permit or a special licence issued or granted by the Starch Controller.

The Textile Commissioner to the Government of India has been authorized in this behalf to perform all the functions of the Starch Controller, and all applications for licences should be addressed to him at his office at Shahibag House, Ballard Estate, Bombay.

Processing Charges Fixed

By a notification in the *Gazette of India* dated the 11th August 1945, the Textile Commissioner to the Government of India has amended his notification of 31st December 1943 which fixes the prices for cloth and yarn and also specifies the processing charges. The amendment fixes the charges for bleaching, dyeing, finishing and other processing of cloth and yarn by all processors other than manufacturers and comes into force from the 1st of September 1945.

Another notification of the Textile Commissioner published in the *Gazette of India* of the same date provides the maximum printing charges which a person may charge for printing of cloth.

Imports of Foreign Cotton

By a notification dated the 11th August 1945, the Central Government have promulgated the Foreign Cotton Control Order, 1945 which consolidates and re-enacts the provisions of the Order of the same name issued in 1944. This new Order requires every person carrying on any undertaking involving the import, purchase, sale or consumption of any foreign cotton, to submit to the Textile Commissioner, Bombay, by the 15th of every month, a return in a specified form and prohibits the sale or disposal, or the purchase or acquisition of any foreign cotton mentioned in the schedule to the said Order except in accordance with a licence or directions given by the Textile Commissioner. The Order empowers the Textile Commissioner to require any person to sell to any other person specified quantities of foreign cotton of the description mentioned in the schedule. It also empowers him to direct any person who has communicated his requirements to the Deputy Chief Controller of Imports, Bombay, to purchase from any other person any quantities of foreign cotton of the description mentioned in the schedule not exceeding the requirements communicated.

The Foreign Cotton Control Order of 1944 is repealed, though anything done under it is to be deemed to have been done under the corresponding provision of the new Order.

Returns of Imported Cloth

The Textile Commissioner to the Government of India has issued a notification in the *Gazette of India* dated 25th August 1945 by which all importers of cloth from outside India are directed to submit by registered post a statement containing information regarding the description and quantity of cloth included in the consignment and the landed cost of each of the items mentioned therein. The statement is to be furnished to the Controller having jurisdiction over the port of entry so as to reach him within two weeks of the receipt of a certificate from the Controller about the landed cost in relation to the cloth referred to in the statement. A copy of the statement should also be forwarded to the Textile Commissioner to the Government of India, CYC-2 Section, Shahibag House, Wittet Road, Ballard Estate, Bombay. The notification further lays down that the importer cannot sell cloth except to such person as the Textile Commissioner or the Controller may specify provided, however, that if within 28 days from the date on which the statement is received by the Controller, the dealer does not receive any instructions as to the disposal of the consignment either from the Textile Commissioner or from the Controller, he may dispose of the cloth.

For the purposes of this Order, the "Controller" means the principal officer appointed by the Provincial Government to be in charge of Textile Control and their designations and addresses for the four main ports are given below:—

Bombay .. Provincial Textile Controller, Kalachowki, Parel, Bombay.
Calcutta .. Director of Textiles, 21, Chittaranjan Avenue, Calcutta.
Madras .. Provincial Textile Commissioner, Record Office, Egmore, Madras.
Karachi .. Director of Civil Supplies and Chief Controller of Prices, Sind, Bombay Life Assurance Building, Karachi.

Cloth for Haj Pilgrims

Pilgrims proceeding for Haj this year are informed that on the representation of the All-India Haj Welfare League, Calcutta, the Government of India have sanctioned a quota of 42 yards of longcloth per "ahram" and "shrouding cloth" for each pilgrim. The cloth will be available at controlled rates at Karachi, the port of embarkation, without any difficulty, on production of the reservation card issued by the Haj Booking Officer.

Revised Control Orders

The Central Government, by a notification in the *Gazette of India* dated the 4th August 1945, have promulgated the Textile Industry (Miscellaneous) Control Order 1945 which is a *verbatim* reproduction of a similar order promulgated in 1943, now repealed. The Order provides that all orders and notifications issued under the Textile Industry (Miscellaneous) Control Order 1943 shall be deemed to have been issued under the corresponding issues of the new Order. It applies to cotton card clothing, card clothing sundries, waste and wadding cards, healds and reeds, shuttles for use in looms, bobbins, ring travellers, etc. The Order prohibits sale or purchase of any of the above articles without a special licence granted by the Textile Commissioner. The Order authorizes the Textile Commissioner to issue directions to any persons possessing the above articles in regard to the sale or disposal otherwise of any articles and to submit stock returns with details required by him.

* * *

Forward Contracts Prohibition

The Central Government have, by a notification published in the *Gazette of India* dated 11th August 1945, as amended by another notification dated 25th August 1945, promulgated the Cotton Cloth and Yarn (Forward Contracts Prohibition) Order, 1945. This Order is a *verbatim* reproduction of a similar Order promulgated in 1943, which has now been repealed but all orders and notifications issued under the latter are continued in force. Under the order any forward contract in respect of cotton cloth or yarn after the 24th June 1943 is void and renders the persons entering into such contract liable to a penalty. The Order does not affect forward contracts for cotton cloth or yarn of specified qualities, and for specified delivery at specified prices, against which delivery orders, railway receipts, bills of lading, etc., are not transferable to third parties oftener than twice.

Commercial and Technical Organizations

Indian Merchants' Chamber, Bombay

Quarterly General Meeting.—The hope that attempts would not be made to mortgage India's industrial future either by giving control to foreigners over her industrial ventures or by giving them a share in the capital required to run them, was expressed by Mr. M. A. Master, presiding over the second quarterly meeting of the Indian Merchants' Chamber, Bombay. He added that participation of foreigners in Indian industries would militate against India's economic freedom and political independence.

Mr. Master drew the attention of members to the system under which joint stock company organizations had been functioning, and stated that even a 10 or 15 per cent. share in capital would vest in the holders the power of veto on such progress and development of the industry as might be prejudicial to the interests of foreigners in future.

He recognized the importance of importing capital goods from the U.K. and the U.S.A. in order to replace the worn-out equipment of industries and to develop new industries, but held the view that that position did not warrant this country encouraging the flotation of East India Companies. India could not afford to allow to go out of her bounds her newly-created wealth. In that connection, he referred to the statements made by the Planning Member and Mr. G. D. Birla in London, and hoped that British industrialists would not think hereafter of exercising managerial control over Indian industries, but would be ready to give technical help to this country on the same terms on which they had given it to Russia.

The President emphasized the need for securing the requisite supply of dollars for India in order to enable her to finance her purchases in the U.S.A., and urged the Hon'ble Sir Ardeshir Dalal to explain the method of getting the dollars released. He asserted that the sterling balances were "the result of untold privations, sufferings and sacrifices of the people of this country," and urged the Central Government to announce, at an early date, the steps contemplated by them to ensure their repayment.

Mr. Mahomed Husein Hasham Premji, Vice-President, pleaded for a broad-based Government policy in respect of Indian trade and industry. The guiding principle governing the foreign trade should, in his opinion, be that imports should be restricted only to those goods which were not being manufactured in the country, while exports should be limited to surplus output and to commodities which would bring special advantage to the country. He, however, regretted that the Government of India had ignored the country's needs.

Electric Merchants' Association, Bombay

Quarterly Meeting.—In the course of his presidential address, Mr. B. C. Munshaw, Vice-President of the Association, at the half-yearly general meeting of the Association held on 21st July 1945, spoke as follows:—

"Britain is now very busy in reorganizing her trade, commerce and industry, and America is jealously watching the same. Under the excuse of Dollar Exchange Control we will not be permitted to import substantially from America. Many who have arrranged to get capital goods from America are experiencing great difficulty in obtaining necessary dollar exchange. They are forced, therefore, to place their orders with U.K. America having her vast fields for exports may decide to leave England to go her own way and allow her to build up her lost power to maintain balance of power in Europe against the ever-growing power of Russia.

"We have lost most of our trade into the hands of import houses, and our civil supplies which are nothing but an instrument of British Government have always shown helping and sympathetic attitude only towards foreign import houses. They are given facilities and licences to import. Unfortunately our own brothers at the helm are made to cut us off. Unless we unite and organize ourselves for systematic trading and manufacturing we shall have still more to suffer. It is still not too late to pool our resources together and do some constructive work in this direction.

"We have in the interest of our Association taken up an additional responsibility with the Assistant Controller-General of Civil Supplies to see that no merchants are put to trouble and in return, we have given an undertaking to supply goods which the customers want if they are available. I appeal to you in our own interests not to refuse to sell if you have goods in stock and be prepared to suffer loss rather than risk prosecutions."

Report of the Committee.—The report of the work done by the Committee during the past six months revealed a tale of continuous struggle with Government for trading facilities and fair-play. The Committee had strongly represented to the Government to fix ceiling prices of electric stores instead of fixing margin of profit as the former would avoid all confusion, litigation and harassment. The Committee had strongly protested against Government's decision appointing only two Indian firms among those selected for distributing American Lease-Lend bulbs.

All-India Electric Merchants' Associations and Annual Conference.—After negotiations with the Electrical Merchants' Association at other centres, the Bombay Electrical Merchants' Association has decided to convene an All-India Electric Merchants' Conference in November next and also to hold an exhibition at the same time.

Textile Association (India) Bombay

Annual Meeting.—A special meeting of the general body of the Textile Association was held on Thursday, 28th June, 1945, at the Vanamali

Hall, to congratulate Mr. Nandulal M. Mehta, B.A., LL.B., Chairman, Managing Committee of the Association, on his appointment as Secretary, Post-war Planning Committee (Textiles). Dr. Nazir Ahmad, the President of the Association, was in the chair. Messrs. G. N. Vaidya, R. G. Gokhale, T. G. Choudhary, B. M. Borkar, and others spoke congratulating Mr. Nandulal on his new appointment and said that the Government had made a correct choice. The speakers hoped that Mr. Nandulal's intimate knowledge of the textile industry would be utilized to the full in planning for the rehabilitation of the textile industry of India in the post-war period. Mr. Nandulal gave a suitable reply after which he was garlanded by the President of the Association, Dr. Nazir Ahmad, who added his own tribute to the meritorious work done by Mr. Nandulal in the cause of the Association.

A special meeting of the general body of the Association with Dr. Nazir Ahmad in the chair was also held.

To add rule No. 12 (i) the following:—In addition to the aforesaid number of co-opted members, the Managing Committee shall also co-opt for each branch of the Association, one member whose name shall have been previously recommended by the respective branch.

Members who have co-opted on the recommendation of the branches of the Association shall be exempted from the operation of rule No. 12 (ii) note (attendance at minimum number of meetings of the Managing Committee) and rule 15 (*b*) (vacating seat after absence from four consecutive meetings of the Managing Committee).

(2) (*a*) All fees collected from the members by the branches of the Association, shall, in the first instance, be remitted to the head office of the Association.

(*b*) The Honorary Treasurer shall retain out of the amount so remitted, a sum of Rs. 2 for the whole year or *pro rata* in case of broken periods per each member as the contribution of the branches towards the expenses of the head office of the Association and the *Textile Digest*, and return the balance to the respective branches, which balance these branches shall spend in whatever way they think best for the furtherance of the objects of the Association.

These rules were unanimously adopted and added to the constitution of the Association, the object behind these amendments being to give representation on the Managing Committee to all branches of the Association and to fix the adjustment of fees received from the branches.

This was followed by the sixth annual general meeting of the Association when 83 members were present. Dr. Nazir Ahmad presided over the meeting. After the Secretary had read the notice and the minutes of the fifth annual general meeting the chairman of the Managing Committee put before the meeting the sixth annual report of the Association and the Hon. Treasurer read the audited statement of accounts of the Association.

Before moving the report for adoption, members were requested to comment on the working of the Association. Mr. O. N. Sharma, Technical Assistant, Chief Inspector of Textile Laboratories, Bombay, said that the work of the Employment Bureau could be further improved by offering assistance to already employed members in getting better jobs. There was a protracted discussion on the subject in which Messrs. T. G. Choudhary, Narain V. Ullal, G. K. Ved, B. M. Borkar, G. N. Vaidya, J. N. Patel and others took part. The Chairman of the Managing Committee then assured the meeting that the whole question would be reconsidered by the Managing Committee and the Employment Bureau. It was, however, clear that unemployed members had first claim on the Employment Bureau.

The report with the audited statement of accounts was then put to the vote and adopted unanimously.

The Secretary then read out the results of the ballot for the election of office-bearers and members of the Managing Committee for the year 1945-46.

President—Dr. Nazir Ahmad, O.B.E., Ph.D., F.Inst.P., J.P., Director, Technological Laboratory, Indian Central Cotton Committee, Matunga, Bombay; Chairman—Mr. Nandulal M. Mehta, B.A., LL.B., Secretary, Post-war Planning Committee (Textiles), Government of India; Panel of Chairmen—(1) Mr. B. M. Borkar, L.T.M. (Hons.), Spinning Superintendent, Phœnix and Bradbury Mills Ltd., Bombay; (2) Mr. D. P. Joshi, B.A., Weaving Master, Morarjee Mills Ltd., Bombay; (3) Mr. Y. J. Hemi, Manager, India United Mills Ltd., No. 5, Bombay. Hon. Secretary—Mr. G. N. Vaidya, M.A., LL.B., Manager, Ruby Mills Ltd., Bombay. Joint Hon. Secretary—Mr. J. J. Randeri, L.T.M., Carding and Spinning Master, Bradbury Mills Ltd., Bombay. Hon. Treasurer—Mr. G. K. Ved, L.T.M., Labour and Welfare Officer, Khatau Mills Ltd., Bombay. Members—Messrs. V. A. Ajgaonkar, Weaving Master, Standard Mills Ltd., Bombay; Narain V. Ullal, L.T.M. (Hons.), A.T.I., Spinning Master, Khatau Mills Ltd., Bombay; K. P. Gavankar, L.T.M. (Hons.), Assistant Weaving Master, Podar Mills Ltd., Bombay; R. A. Golikeri, L.T.M. (Hons.), Weaving Master, Shree Ram Mills Ltd., Bombay; V. M. Deshpande, L.T.M. (Hons.), Weaving Master, Ahmedabad; J. B. Sane, M.Sc. (Tech.), Dyeing Master, Khatau Mills Ltd., Bombay; Dr. D. B. Kirtikar, Ph.D., Partner, Ukane Pharmaceutical Works, Bombay; J. A. Sutton, Manager, Kohinoor Mills Ltd., Bombay; Y. G. Pathak, M.Sc. (Tech.), Manager, Vasant Vijaya Mills Ltd., Bombay; and Dr. K. P. Kelkar, Ph.D., Head of the Electrical Department, V. J. T. Institute, Bombay.

Employers' Association of Northern India, Cawnpore

Annual Meeting.—In the course of his presidential address at the eighth annual meeting of the Association held on 23rd August 1945, Mr. J. Tinker touched on several subjects including coal supplies and labour and control measures. Cawnpore production did not suffer materially owing to coal shortage, and is not likely to, in view of the experiment, now being tried in port towns, of changing over from coal-burning to oil-burning in industrial plants. Up-to-date this is expected to result in an economy of 5,500 tons of coal a month.

Mr. Tinker repeated the view that, in the matter of labour legislation, Government were going too far and too fast.

As regards post-war planning Mr. Tinker explained Government's intention as being to prevent the expansion of the cotton mill industry in Provinces where production is in excess of requirements and in towns and cities where congestion is already great. For example, expansion will not be permitted within the present boundaries of Cawnpore.

New Chairman.—Lala Kailashpat Singhania was elected Chairman of the Employers' Association of Northern India for the year 1945 and Mr. E. J. W. Plummer, Deputy Chairman.

The following gentlemen were elected to the Managing Committee to represent the smaller employers for the year 1945: Sir Har Govind Misra, Kt., O.B.E. and Mr. Hari Shanker Bagla.

Federation of Piecegoods and Yarn Merchants' Associations of India, Bombay

"At Home" to Officials.—Representatives of various provincial and Indian States Textile Directorates were entertained at tea on Sunday the 9th September 1945, in the Indian Merchants' Chamber Hall by Mr. Gordhandas G. Morarji, J. P., President of the Federation of Piecegoods and Yarn Merchants' Associations of India.

Representing the difficulties experienced by merchants in different parts of the country under the present system of control and distribution, Mr. Morarji observed that, sorely tried as the dealers already were on account of various restrictions imposed on them, the early termination of the war in the Far East had given rise to a feeling of nervousness in view of the imminent possibility of release for civilian consumption of huge stocks of cloth held by Government and of an increasing influx of foreign goods which would cause a sudden fall in the present prices and handicap the dealers with severe competition in the post-war period. Although goods were being despatched regularly in large quantities from manufacturing centres, huge stocks of cloth had accumulated in the consuming centres in the provinces and States on account of enormous delays in releasing the same for distribution caused by inadequate or defective machinery, with the result that acute shortage of cloth was still being experienced in many places. The dealers had little choice in respect of the goods received by them from the manufacturers and found considerable difficulty in selling some of the varieties of cloth which found no favour whatsoever with the public. This difficulty was bound to be aggravated by the production of utility cloth, some varieties of which were found to be hardly saleable. Despite all this, several merchants had been prosecuted to their great vexation for being in possession of meagre quantities of time-barred cloth whereas a more rational, realistic and practical view of the matter would have been in greater consonance with just and fair-minded treatment. Despite several assurances given from time to time by the Government of India regarding the maintenance of normal trade channels as far as possible, the work of distribution had been entrusted in many places to agencies like banks and co-operative societies, which possessed little or no experience of the trade and which were not in a position to make supplies of cloth available in small and remote villages in the interior on the basis of credit rather than cash payment. Lack of uniformity in allocating margins of profit at various stages of distribution in certain areas had caused further loss and hardship on a considerable scale to the dealers concerned. The issue of licences had also led to a good deal of dissatisfaction amongst dealers of long standing, while a feeling of uncertainty and anxious suspense was troubling the trade in general as the basic principles on which licences would be renewed had not been clearly enunciated or made public, but kept a close secret. It was also necessary to explore all the possibilities of providing for better facilities of transport for movement of goods in this country of long distances, now that the war had come to an end.

Indian Chamber of Commerce, Calcutta

"Withdraw War-time Controls."—In the course of a statement, Sir Abdul Halim Ghaznavi, President of the Chamber, contrasts the working of controls in India with that elsewhere and pleads for their early removal. Consumer goods imports should be strictly regulated while the imports of capital goods required for India's industrialization should be liberally encouraged. Proceeding, he observes:

"The decontrol measures should, however, be effected in such a manner that Indian industry does not fall an easy victim to the expected emergence of intense foreign competition. While, therefore, it may be necessary to restrict import of consumer goods of such categories as are manufactured in the country, control on import of capital goods required for expansion, replacement and repairs will have to be considerably liberalized and modified, if not fully removed. Similarly, control on capital issues, which more than anything else has hampered the flotation of new companies and the expansion of existing ones, needs to be withdrawn immediately. The Defence of India Act and the Rules made thereunder should be repealed as the emergency created by the war no longer exists. Similarly the Hoarding and Profiteering Prevention Ordinance should also be repealed. Resumption of the normal channels of trade in the distribution of goods and in the export and import trade of the country should be allowed to take place without delay. Assistance by Government to industry in obtaining raw materials and other resources, facilities for transport, fuel supply, etc., should continue to be given even after the termination of controls.

REVIEWS

The Law and Practice under the Trade Marks Act, 1940. By S. Venkateswaran, B.A., B.L., D.Sc., Deputy Registrar of Trade Marks, Bombay. Sole Distributors: Eastern Law House Ltd., Ganesh Chunder Avenue, Calcutta. Price: Rs. 30.

An exhaustive and scholarly exposition of the statute law of Trade Marks, the book under review is believed to be the first publication of its kind. The principles of the law are explained with clarity and the analytical treatment that has been followed facilitates reference to points of law. The history of the law is given in each section and the differences between the corresponding sections of the Indian and United Kingdom enactments are brought out clearly. The author having been connected with the administration of the Trade Marks Act ever since the inception of the Trade Marks Registry, the different sections of the volume can be considered authoritative.

A mass of information of great value to trade has been included in the appendices and millowners in India should find the whole book an essential book of reference of great value. A separate chapter has been given to an explanation of the special provisions for textile goods.

Digest of the Industrial Court Cases—A Review. Prepared by K. R. Wazkar, M.A., LL.B., Secretary, Industrial Court, Bombay. Printed at the Government Central Press, Bombay Price: Annas12.

It will be recalled that in the issue of the *Textile Journal* for the month of February 1945 we published a specially contributed article on the Industrial Court, Bombay, which dwelt at length upon the working of that Court since its inception in 1939 and gave a general idea of its duties and functions. During the past six years, the Industrial Court, Bombay, has passed several Orders sitting as a Court and given several awards acting as a Court of Arbitrators. In the article referred to above, it was aptly stated that the judgments and awards of the Industrial Court stood as monuments in the history of industrial relations in India. Mr. K. R. Wazkar, Secretary of that Court, therefore, deserves congratulations on bringing out a digest of all the Orders and awards given by the Industrial Court till the end of 1944. Although the *Bombay Government Gazette* and the *Labour Gazette* of that Government published the decisions of the Industrial Court in full, there has so far been no attempt to consolidate and collate the whole material in a single volume. This book is, therefore, the first attempt to sift the principles underlying these decisions and put them in a single book. It must be said to the credit of Mr. Wazkar that he has done the work with great care, commendable zeal and intelligence. The book thus gives in a nutshell, in properly arranged order, the salient principles which have gone to the making of important case-law.

The Digest is a very handy and useful book of reference for all those who are connected with the working of the Bombay Industrial Disputes Act, 1938. As it contains the principles underlying the decisions of the Industrial Court, the Digest would prove useful as a guide to other Provincial Governments desirous of formulating their labour legislation on the subject of industrial relations.

NOTICES

The "Indian Home," Roman-Urdu Edition, is published by Mr. Mohan V. Raj, M.A., B.Sc., (Minn)., for Indian Home Publications Ltd., 47, Lakshmi Building, Sir Phirozshah Mehta Road, Fort, Bombay. The editors are Miss Shanta Wagle and Mrs. Shahla Wilson. Single copy Rs. 1-4, annual subscription Rs. 16 including delivery free at the door of the readers.

The Roman-Urdu Edition of the *Indian Home* has just completed one year of useful service. This magazine is primarily meant for servicemen and their families. It contains civic and social information, helpful articles on village uplift, rehabilitation of troops, hygiene, child welfare, domestic hints, wholesome and amusing entertainment.

The first Anniversary Number now received is full of valuable information, useful articles, interesting and entertaining stories, such as Mulk ki Taraqqi, Roman Urdu Rasm-i-Khat, Ghalla Taqsim karne ka Intizam, Kya Ap Jante Hain, Khanadari, Thes, etc.

Safety First Association of India: Thirteenth Annual Report. The latest annual report to hand shows that the Association has been maintaining steady progress. The Association's programme during the year was based not only on the education of the community in the fundamentals of group and communal living, but also on helping industries towards the successful prosecution of the war. As usual, in the field of industrial safety the Association rendered valuable service to factory executives with advice and suggestions. The Association's poster service was utilized to a far greater extent than in previous years.

Handloom Weaving Industry in India. By M. P. Gandhi. Published by Gandhi and Co. (Publishers), Jan Mansion, Pherozeshah Mehta Road, Bombay. Price: Re. 1.

With the coming into existence of the All-India Handloom Board as a result of one of the recommendations of the Fact Finding Committee, the handloom in India looks very much like coming into its own. The enormous demands created by war and the heroic way in which the handloom has supplemented the efforts of the mill industry make encouraging reading. . Realizing that the handloom weaver has not for long had his due share of the reward for honest labour, the Government of India until recently did not think of applying control provisions regarding price fixation, etc., to the handloom product, besides trying their best to make available to the handloom weaver yarn and dyes and chemicals in adequate quantities and at reasonable prices. While they cannot yet be said to have been quite successful in the latter field, their refraining from interfering with the prices of handloom products has meant substantial benefits to the weaver at the expense of the consumer who has now been clamouring for the fixing of ceiling prices for handloom products also. The difficulties in the application of control of any kind to a highly decentralized industry cannot be exaggerated. All the same the All-India Handloom Board is reported to have considered the question last month. In the small booklet under notice Mr. M. P. Gandhi gives the readers some of the more important aspects of the industry, traces the causes of its decline, indicates the methods by which the problems facing the industry can be solved and suggests practical lines for the development of the industry.

J. K. Review, Vol. 5, No. 11, has interesting contributions on the control of fatigue in British industry and on the chemical cleaning of boilers.

Problems of Social Security for Industrial Workers in India. By A. N. Agarwala. Reprinted from *International Labour Review*, January 1945. Proposals for the introduction of a scheme of health insurance for industrial workers in India have been under consideration for several years. The question has been rendered urgent by the present need for reconstruction planning and the desire in India, as in other Allied countries, to be prepared with plans for social security. In March 1943, the Department of Labour, Government of India, appointed an officer, Professor B. P. Adarkar, on special duty to prepare a scheme of health insurance for industrial workers. In August 1944 he submitted a report setting out a scheme, after consultations with the Central and Provincial Government officials concerned and with representatives of employers and workers, and after having reviewed the existing schemes in different countries. The following article, which was prepared before the Adarkar report was published, traces the course of the earlier enquiries for the introduction of a system of social insurance for industrial workers and gives an analysis of the social structure of industry in India. It concludes with a plea for the economic development of the country and the early introduction by the authorities of an experimental scheme of health insurance.

Mr. Agarwala traces the obstacles to the establishment of social insurance institutions of India.

The Governments' unpreparedness to bear their proper share of the financial burden and the economic backwardness of the country are among the most important of them. The other difficulties are not as great and may be expected to be overcome in course of time. The future of social insurance in India may, therefore, in the final analysis, be said to depend on the adoption of economic planning and on a reorientation of the financial policy of the public authorities in respect of social welfare.

Khatau Sports Review, Vol. IV, No. 1, includes as usual interesting contributions on cricket, football, tennis, table-tennis and badminton,. besides several articles on camping, scouting, etc. Dr. K. V. Joglekar's paper on industrial health and medical service read at the last all-India Textile Conference has been reproduced in this number.

Sprinkler Bulletin, No. 172. Published by Mather and Platt Ltd., Manchester, the latest issue to hand of this quarterly house organ, examines the causes of fire in industry. It attempts to answer the question: Can those causes be eliminated? and How can the effects be minimized? The issue includes also an account of the fight so successfully carried on by sprinklers against incendiary fires in England.

Indian Merchants' Chamber, Bombay: Annual Report for 1944. The proceedings of the 37th annual general meeting, successive lists of the chairmen and office bearers for 1945 are given in the introductory pages. There is, as usual, a full report of the Committee of the Chamber for 1944 as well as the correspondence that passed between the Chamber and Government on most of the important topics of the day.

Tata Iron and Steel Co., Ltd., Annual Report for 1944-45. The net profits of the company, after setting aside sums for taxation and depreciation, amounted to Rs. 3,21,71,814, out of which they have, as usual, set apart a sum of Rs. 50 lakhs for payment of bonus to the employees under the profit-sharing scheme.

The grave shortage of coal and the deterioration in the quality available for coking were the main factors responsible for the reduction in the output of finished steel and the increase in the cost of production during the year. Vigorous measures of fuel economy were adopted in the plant in order to minimize, as far as possible, the adverse effects of these factors on costs and output. Although the seriousness of the coal situation was repeatedly brought to the notice of the authorities concerned, it unfortunately still continues to give cause for anxiety.

Random Review of Textile Progress

By T. V. PUNNOOSE, B.Sc., *Trivandrum*

(*Specially Contributed*)

I. Ardil—A New Synthetic Protein Fibre

A NEW synthetic fibre called "Ardil" which resembles wool in many of its properties such as resiliency, softness, warmth, but without the disadvantages of shrinkage (felting) and moth-proof effect has been developed by Imperial Chemical Industries. The new synthetic fibre is prepared from groundnut protein which produces 500 lbs. of ardil from one ton of nuts. The researches of Astbury and Chibnall led to the possibility of utilizing vegetable protein for the production of synthetic fibres and the latter succeeded in preparing a wool-like fibre from humpseed protein. This led Imperial Chemical Industries to consider the commercial exploitation of this new development and they choose *groundnut* as the raw material, for reason of economy and also on account of its high protein content.

A chemical analysis of groundnut has shown that it contains 48-50 per cent. arachis oil, about 28 per cent. protein, 11 per cent. carbohydrate and 8 per cent. salt, water, etc. The extraction of the oil is first carried out by low temperature method and may be used for human consumption. From the oil-free meal, which contains 9 per cent. nitrogen, protein is next extracted, which leaves a residual meal containing 2 per cent. nitrogen and which could be used for feeding cattle. The protein is then dissolved in caustic soda solution to produce the spinning solution which is extruded through spinnerets to form the filaments. I.C.I. has evolved a special method for hardening the filaments which is not by using a formaldehyde bath since the protein was hydrolysed. The hydrolysis was avoided by lowering the pH of the bath.

The dyeing properties of ardil are similar to those of wool, so also its absorption of moisture and heat of wetting. Even though fabrics may be made purely of ardil, it is recommended that ardil should be profitably used in mixture with wool, cotton or rayon.

The raw material for ardil is groundnut and India alone produces 34 per cent. of the world's production of groundnuts. If the process is successfully carried out by I.C.I., we will be getting the newly produced fibre or fabric from our own raw material in exchange.

II. Nylon

The Nylon fibre is the outcome of years of research work done by Dr. W. H. Carothers and collaborators, and it was first made in the laboratories of E.I. du Pont de Nemours & Co. of Wilmington, Delaware, U.S.A. in 1938. The word nylon was coined by Du Pont Company as the generic name for all materials defined scientifically as "synthetic fibre forming polymeric amides having a protein chemical structure, derivable from coal, air and water or other substances and characterized by extreme toughness and strength and the peculiar property to be formed into fibres and with various shapes."

Many varieties of nylon polymers are known and more than a hundred patents have been taken for their production. The condensation process of building up a large chain molecule from smaller ones could be effected in several ways. One way is to react a dibasic acid with a di-primary diamine and then heat the product until the large chain molecules are built up by "condensation." One super-polyamide known as "66" polymer is formed by heating the reaction product of adipic acid and hexa-methylene diamine. Each molecule of this reagent contains six carbon atoms and hence named "66." The raw materials from which the diamine and acid for making "66" polymer are obtained from phenol, for carbon and oxygen ; nitrogen for air and hydrogen from water. The method of manufacture is complicated.

The nylon polymers are obtained in chips, flakes or powder form. They are melted in a pressure vessel so as to get the consistency of honey and then extruded at high temperature at a constant rate through a spinneret by pump. On emerging from the spinnerets, the molten polymer is cooled and solidified into filaments by a current of air. These filaments after treatment with steam are wound on to a bobbin, twisted a few turns and subjected to a process known as cold drawing. In this operation, the extruded filaments with chain-like molecules distributed at random are stretched to obtain the desired orientation, whereby the chains take up a position lying parallel to the longer axis of the fibres and closer to one another. These filaments are twisted together and reeled.

The nylon yarns are characterized by high tensile strength, high resistance to moisture and extraordinary resistance to all ordinary solvents. It is wrinkle-free and dries extremely rapidly after laundering. It is sometimes delustred by the use of titanium oxide. It has a specific gravity of 1.14 which is lower than almost all fibres known. Nylon yarn if used for the toe and heels of socks last much longer.

The moisture regain of nylon yarn at 65 per cent. R.H. and 25° C. is 3.8 per cent. whilst at 97 per cent. R.H. and 25° C. is 6.2 per cent.

So it absorbs much less moisture than silk, cotton, wool or viscose.

If heated for 1 hour in boiling water, the filament shrinks 8 to 11 per cent.

In cold water nylon yarn shows a shrinkage of 2-3 per cent. Being thermoplastic, it can be set to any predetermined shape.

Reagents like organic acids, carbon-disulphide, carbon-tetrachloride; trichloroethylene, dilute alkalies, soaps, petrol, benzene aldehydes, ketones, alcohols do not have any action. But formic acid, phenol, m-cresol, and the higher phenols and phenolis acids dissolve nylon.

It is degraded by oxidizing agents and mineral acids. Even dilute solutions of acids like Hcl ; HNO_3 ; H_2SO_4, make the yarn brittle and finally disintegrate it.

Even though a 10 per cent. solution of caustic soda at 85° C. shows no apparent degradation after 16 hours, a slight degradation is noticed at 90° C. with a 40 per cent. solution.

Its tensile strength is not affected by ironing or heating to 400° F. Above 470° F. it melts.

The experimental stage of nylon is over and it is used for hosiery and other purposes. For war purposes, it has been used for canopies, cords for man-dropping parachutes, glider tow ropes, tents, shoe laces, tyre cords for heavy bombers, and for all purposes, where elasticity and resiliency are important factors.

III. Amioca Starch for Sizing, Finishing, Printing, etc.

Amioca starch is obtained from a new variety of corn cultivated very recently in the United States Department of Agriculture. This new species of starch-yielding corn is said to have originated from China.

The surface of the cut kernels of this new variety of corn looks like hard wax, even though they do not contain any wax at all. Amioca differs considerably from corn starch, especially in the gels formed when heated with water, which are long and gummy. They remain in fluid condition and do not set back to a paste like ordinary corn starch gels, and are more or less clear in appearance as compared with the opaqueness of regular corn starch gels.

But this starch resembles tapioca starch to a great extent and hence could be used as a substitute for the same.

The amount of starch liquifying enzymes necessary to convert a known weight of amioca and tapioca starch are more or less the same, whereas a greater amount is required for corn starch. So also the amount of acid required to convert amioca and tapioca starch to produce dextrins of different types are also approximately the same, but do not agree with that of corn starch.

In clarity and transparency, dextrins and gums manufactured from amioca resemble tapioca. The Stein Hall Chemists of U.S.A. took trials with amioca starch for textile warp sizing, finishing, printing and showed results for warp sizing and finishing comparable with those obtained with potato starch and tapioca flour. Sizing with amioca starch gives more pliability to yarn and breakage in weaving is less even on a day of low humidity unlike corn starch. As a finishing starch, it imparts fullness and feel similar to that of tapioca or potato starch. It also yields a good gum and can be used satisfactorily for veneer work, giving a fluid glue of high solid content and good binding strength. Gums made from amioca for boxes, envelopes and for purposes like tube winding give very satisfactory results.

Why not try the same cultivation in India too ?

TRADE LETTERS

(From Our Special Correspondents)

Ahmedabad

COMPLAINTS against the steady deterioration of the quality of local mill cloth are increasing. Taking advantage of the prices of cloth fixed by Government, local mills are said to be dumping in the market unwanted inferior goods to get increased margin of profit. Quota-holders who were forced to accept whatever cloth was offered to them by the mills are, it is understood, allowed by Government to reject their quota without its being cancelled by a mill. Now they demand that any unsold quota may be returned to a mill after deducting their fixed margin of profit. Unless some such thing is permitted by Government local mills will not stop lowering the quality of cloth manufactured by them.

They manufacture, in particular, more and more inferior printed cloth as printing charges fixed by Government are much higher than the actual printing charges. Government is being urged to lower printing charges to discourage mills manufacturing excessive printed goods. The demand for ready-made cloth which was the most potent cause of black markets has considerably slackened down with the end of the war. There is no other depressing effect on the cloth market due to the end of the war as Government controls seem to have saved the cloth market from the shock of peace. Both merchants and industrialists who were at first resenting Government control are now blessing it cordially and believe that it will continue for some time to their advantage. Local industrialists who are debarred from starting new mills by Government think of opening new mills in deficit provinces. It is stated that one of them has been permitted to open a big mill in Bengal.

Government approved cloth shopkeepers have been perturbed by the circular issued by the Assistant Textile Controller putting them on the same level with the ordinary retail cloth dealers in respect of the varieties of cloth allotted to them. They contend that this goes against the declared policy of Government to allot superior varieties of cloth to approved shops by virtue of the bonds executed by them. They also complain that they have not received any cloth quota for over a month and fear that their quota too will be reduced as they are allowed by the Assistant Textile Controller full margin of profit instead of 10 per cent. hitherto allowed by Government. They have formed their separate association and authorized their president to see the Provincial Textile Controller and seek clarification of Government policy regarding approved cloth shops on which Government relied so much for killing black markets. No complaint has been made either by Government or the public against approved cloth shops, and there is no reason why they should be reduced to the status of ordinary cloth dealers. If this is the policy of Government, approved cloth shops will close down as they cannot afford to fulfil the requirements of Government without continuing to get the quota which they have received so far, both in quality and quantity.

Set-back for Technological Institute

The movement sponsored by the Ahmedabad Millowners' Association for starting a technological institute has received a setback as Government have pleaded inability to allow donations to this institute to be exempted from income-tax. It is stated that Government will make provision for this in the next budget when the Millowners' Association will start collecting donations for the institute. Meanwhile Mr. Bhailal Patel, a former engineer of the Ahmedabad Municipality, has prepared the plan of a town at an estimated cost of about Rs. 50 lakhs. The town will cover an area of about 800 acres near Karamsad, the native town of Mr. Vallabhbhai Patel. The whole area will be fully developed and sold, and out of the profits earned technical and engineering colleges will be run. This is the first big attempt in India at systematic land development for a charitable purpose, and both Mr. Gandhi and Mr. Vallabhbhai Patel are said to have blessed it.

The Industrial Court has made a cut of 18 per cent. in the dearness allowance received by the textile operatives while renewing it for a year. The Ahmedabad Millowners' Association pleaded for fixing it on a scale paid to Bombay workers, but the Industrial Court rejected that plea. The Labour Association, while congratulating the Industrial Court, regrets that the Ahmedabad workers are being made to suffer "for the sins of others." It states: "This is a consequence of the state of disorganization and helplessness in which the workers in Bombay and other places find themselves," and urges the workers in the country to consolidate their forces. Ahmedabad workers have secured, by means of arbitration and conciliation, a higher standard of living than workers in other centres who have followed the method of strike. They have proved the efficacy of their means, but they feel that they cannot maintain the higher standard of living without raising the standard of living in other centres. They seek collaboration with the workers in other centres through the All-India Mazdur Sevak Sangh which is established in order to extend the activities of the Labour Association of Ahmedabad to other centres. The Labour Association of Ahmedabad, which has remained aloof from the All-India Trade Union Congress, seeks to influence its policy through the All-India Mazdur Sevak Sangh which will be conducted as a sister, not a rival institution.

Dr. Kumarappa's Visit

Dr. J. M. Kumarappa, Director of the Tata Institute of Social Sciences, addressed the Rotary Club of Ahmedabad on "Social and Industrial Research in U.S.A." He said that India had much to learn from the remarkable progress in research made in the U.S.A. The application of scientific methods in the solution of social problems and in the promotion of economic welfare contributed not only to making America the wealthiest but also the most democratic country in the world. The standard of living through mechanization had been improved to such an extent that the servant class as a class had practically disappeared. The difference between the professional class and the working class was not so much in the difference in salaries they received as in the nature of the work they did. The character of the American population was also changing. The extremely rich and extremely poor classes were getting smaller while the fairly well-to-do middle class which formed the backbone of American democracy was ever increasing.

Social research in the United States was carried on for getting reliable data for social legislation, for supporting appeals for funds from social agencies, for evaluating effectiveness of welfare programmes, and for introducing new techniques and procedures. Industrial research was carried on to improve productive methods and increase national wealth. Each big business had its own most elaborate laboratory with outstanding scientists. Industrial research foundations were organized to provide consultative service for small business men who could not afford to maintain expensive laboratories. Research laboratories on a co-operative basis were also conducted. Dr. Kumarappa made a vigorous plea for the manufacture of small machines and tools for the improvement of Indian village economy when capital goods were unavailable from abroad.

Cawnpore

Quarterly Report on Rationing

ALL apprehensions about the success or otherwise of the rationing scheme in Cawnpore have proved to be abortive. The three months of rationing of essential food articles in the city have been an unqualified success. Authoritative figures given by the rationing authorities show that 5,44,293 maunds of rationed foodgrains were consumed during the three months of total rationing in the city. The non-rationed foodgrains consumed in the same period was 1,40,460 maunds. The population covered by the total rationing is stated to be 7,87,281 out of which railway population is 17,135 and mill population 36,685 which included 37 large and 112 small institutions as also bodies like the jails, halwais, hotels, and others. The average ration per unit is 5.75 *chhataks*, the number of card holders is 2,81,383.

Hydro-Electric Schemes

The working of the Ganges Canal Hydroelectric Schemes showed considerable development as a result of war-time conditions, when increased currents were required both for agricultural as well as industrial uses. The maximum synchronized peak load during the year rose to 26,910 kw. as compared with 23,810 kw. in the previous year. The total capacity of the generating stations is limited to only 27,900 kw. And in order to meet the demand for the essential new loads the supply of energy had to be regulated in the urban areas.

The total number of units sold was 95,393,372 which gave a yearly load factor of 40.50 per cent. as compared with 80,127,206 units sold in the previous year with a load factor of 38.42 per cent. The increased number of units sold was consumed mostly by the factories engaged on essential war works.

The demand for greater supply of power for industrial and agricultural purposes lead to the construction of the Harduaganjstead station which has made considerable progress as circumstances permitted. A project to construct a new hydro-power station with the capacity of 9,000 kw. approximately at Muhammadpur to augment the supply capacity of the Grid was also investigated and progressed. It is hoped that some other schemes too for generating electric power will soon be matured for construction, as at present the total industrial connected load was 18,020 h.p., giving an increase of 2,260 h.p. over the total of the previous year. The agricultural load connected during the year was 4,010 h.p. as against 3,968 h.p. in the previous year.

Labour Situation

The annual report of the Employers' Association of Northern India submitted to the general body meeting held last week brings to the public notice several salient features governing labour and employment conditions in the Province. There was no disquieting factor or labour unrest—as a whole labour remained steady at work—employment conditions being favourable, the payment of dearness allowance adjusted to Cost-of-living Index and the setting up of mill grain shops, where foodgrains were available to workers at concession rates keeping them content at their posts. The conciliation machinery and adjudication proceedings also worked smoothly. Trade unions, it is revealed, "continued to support the war effort, and dissuaded workers from adopting unconstitutional methods of putting forward their grievances." As in the previous years, the member concerns of the Association declared a gratuity—in the case of cotton, woollen and leather industries at As 4 in the rupee on basic wages. The majority of the remaining members also paid bonuses ranging from As 1½ to As. 4 in the rupee on their basic wages. The supply of foodgrains at concession rates continued and there were over 100 mill grain shops in operation under the Industrial Rationing Scheme in Cawnpore. The grain shops, it is reported, have become very popular and the total amount expended by member concerns rose to Rs. 1,45,73,526 as against Rs. 1,02,00,000 for the previous year.

Mr. J. Tinker who presided over the meeting appealed to Government to "cancel all the controls and permit business to resume normal channels. If this be not possible in every respect immediately, many controls can at least be eased very considerably," he said.

Lala Kailashpat Singhania, Senior Director of J. K. Industries, was elected Chairman, and Mr. E. J. W. Plummer, Managing Director of the Swadeshi Cotton Mills, was elected Vice-President for the ensuing year.

Post-war Scheme for Demobilized Soldiers

The war having come to an end, the Government of the U.P. are going ahead with their schemes of post-war reconstruction for the benefit of ex-soldiers. Various channels of employment are being found for them. A Directorate for Resettlement and Employment of Demobilized Soldiers has been set up in the Province, and the Government of India have also agreed to contribute a part of the expenses out of their funds.

Gen. Sir Thomas Hutton, Secretary to the Government of India, Planning and Development, held a conference with local officials which continued for three days during which period all aspects of post-war problems were discussed threadbare.

The first move in this direction is the importing of about 100 tractors costing about Rs. 20,00,000 within the next few months. All available waste and uncultivated lands have been surveyed and the Government is confident that it will be able to provide land in Tarai Garhwal, Kheri, and Meerut regions to about one-fifth of the returning services personnel in the first year of its scheme of colonization. Land will be given to those ex-soldiers only who did not possess any agricultural holdings.

The Government also have constituted a sub-committee of the Industries Committee of Post-war Reconstruction under the chairmanship of Pandit Rajnath Kunzru, to investigate the position of the cottage industries and to suggest ways and means of improving their working. The Government have in view, it is understood, the intention of starting several new industries for absorbing demobilized soldiers.

It is also learnt that four more vocational training centres in the Province (in addition to the existing nine centres) is to be opened with a view to cope with the problems of training demobilized soldiers in various branches of arts and crafts, animal husbandry, agriculture and cottage industries.

Cloth Market Crisis

There is again a crisis in the cloth market. The Textile Commissioner, U.P., has decided that no cloth dealer should act in more than one capacity. They must decide now, it is announced, whether they are to remain as wholesale dealers or retailers or commission agents. Most of the wholesale dealers and commission agents have surrendered their licences because they have decided to continue as retailers but the wholesale dealers who were doing retail business in the "basic" years are still retaining their retail licences.

The District Supply Officer, in view of the above decision, has ordered that licences of such dealers who have elected to discontinue should be surrendered forthwith.

The Kapra Committee has lodged its protest against the new order and their contention is that "this new order is against the spirit of the definite assurance given by the Government when the Cloth and Yarn Control Order was promulgated, that normal channels will be interfered with as little as possible." They further argue that there is no specific provision in the Cloth and Yarn Control Order prohibiting a cloth dealer from acting in more than one capacity.

Calcutta

Association for Cloth Distribution in Bengal

An association to control procurement of cloth for Bengal and its distribution is to be set up by the Provincial Government. This was announced at a Press Conference in Calcutta by Sir Akbar Hydari, Secretary, Civil Supplies and Industries Department, Government of India, who with Mr. K. Thackersey, Chairman, Textile Control Board, Mr. Kasturbai Lalbhai, member of the Board and Mr. M. K. Vellodi, Textile Commissioner, Government of India, had been making local inquiries regarding Bengal's cloth procurement and distribution problems.

Sir Akbar said that it would have a governing body on which would be found some of the most respected names in Calcutta—Hindu, Muslim and Marwari—who had agreed to join it. The governing body would have an executive committee consisting of representatives of various chambers of commerce and nominees of the Government. The Director-General of Cotton Textiles would be ex-officio member of the Governing Body and possibly the chief executive officer of the Association. Provision had been made that the Director-General or the Government might be consulted at all important stages.

Explaining the object of their visit to Calcutta, Sir Akbar said that they had not come on a fault-finding mission. They had received reports that there was trouble about cloth distribution in Bengal. Obviously, the cloth that had come to Bengal had not been properly distributed. In the circumstances they informed the Bengal Government that they would like to visit the province and offer their advice. The offer was accepted.

They had discussions of an exploratory nature with representatives of different interests. They discovered that the syndicate scheme had aroused a good deal of criticism. This was to the effect that the proposed syndicate was a "commercial octopus" legally recognized, which would vest the province's cloth trade in a particular community to the detriment of the rights of other communities and sections and would get so powerful a hold on the cloth trade that it would leave no chance to other elements in the future to take an increasing share in it.

On a close examination of the syndicate scheme, Sir Akbar and his colleagues felt that these fears were unjustified as sufficient safeguards had been provided. During the two or three years of control that they had had the Central Government realized that where popular fears and suspicions were widely expressed, the path of wisdom was to see how these could be removed.

Various suggestions had been made which went against the control policy hitherto followed by the Centre. The Government's policy was that economic control should be exercized as far as possible in a businesslike way without consideration of community or class. So great was the objection to a syndicate that there were proposals to have more than one such organization, based not on any economic consideration but on considerations of community.

The Government did not believe in control being exercised on communal or political lines. Control was meant to make life easier for the ordinary man and woman, irrespective of any community or creed. The whole purpose of control was to get the particular commodity controlled available at a reasonable price. Whenever possible the ordinary trade channels should not be more disturbed than necessary. That being the Government's view, they thought it was their duty to see whether they could not evolve a scheme which would bring all sections under one co-operative umbrella. The Government had provided such a scheme. It had no relation to a syndicate disposing of vast funds and making vast profits. The scheme had been accepted by the Bengal Government.

After referring to the proposed association, Sir Akbar said that they hoped that with the co-operation of the trade it might be possible for this organization to utilize the ordinary trade channels which would now be under its control. It was expected that the Association, helped by the Director-General of Cotton Textiles, would so arrange the procedure that a watch might be kept over the cloth coming to Calcutta and going to the districts.

For working such a scheme, the support and co-operation of different interests were necessary. This had been promised. This was the first time that various interests connected with the cloth trade in Bengal had agreed to work the scheme under the aegis of the Government and this was a hopeful sign for the province.

He appealed to Bengal to see that the scheme was given a fair trial.

Constitution and Functioning of the Association

The scheme outlined by Sir Akbar Hydari, Mr. Krishnaraj M. D. Thackersey, Mr. M. K. Vellodi and Mr. Kasturbhai Lalbhai for the formation of an association under Government control to arrange for procurement and wholesale distribution of cotton cloth for Bengal provides that the Association will work through a Governing Body of eight members and the Governing Body will be assisted by an Executive Committee of 25 members.

Membership of the Association is to be restricted to *bona fide* wholesale dealers in piecegoods in Calcutta.

The Governing Body will be composed of Sir Badridas Goenka, Sir Adamji Haji Dawood, Sir Abdul Halim Ghuznavi, Mr. B. M. Birla, Mr. R. L. Nopani, Mr. M. A. Ispahani, Dr. N. N. Law and Mr. J. K. Mitter.

The Executive Committee, of which the members of the Governing Body will be ex-officio members, will be constituted with 17 others including two nominees of the Bengal Chamber of Commerce, the Muslim Chamber of Commerce and the Bengal National Chamber of Commerce each, eight elected members of the Association and three nominees of Government.

The scheme, which has been accepted by the Bengal Government, lays down that: (i) the Bengal Government should take steps to form an association or company, as may be found to be legally feasible, for the procurement and distribution of cloth. This Association will consist of the wholesalers of Calcutta and will be under an agreement with Government to carry out their directions in all matters of records, returns, procurement, storage, distribution and prices.

(ii) Membership of the Association is to be restricted to *bona fide* wholesale dealers in piecegoods in Calcutta, a "wholesale dealer" being defined as one who was doing wholesale business in piecegoods in Calcutta during any two of the years 1940, 1941, 1942, 1943 or 1944 and in that period purchased a minimum of 120 whole bales or cases of cotton piecegoods other than from a mill and sold the same wholesale in Calcutta in the form of piecegoods.

(iii) A *bona fide* Calcutta wholesaler will be permitted to apply for and to be entitled to be allotted a share of the business on the following basis :—

5 bales minimum a month average in any two years 1940-44. The period may be reduced to one year if desired		.. ..	1 unit
10 bales	do.	do. ..	2 units
15 bales	do.	do. ..	3 units
20 bales	do.	do. ..	4 units

(iv) The present six authorized dealers are to be entitled to four units each.

(v) The Association will work through a governing body and an executive committee.

(vi) The Association will nominate persons to buy all the requirements of Bengal in the producing centres. The quota holders in Bengal of mills situated outside Bengal will be required to dispose of their quotas of cloth at the production centres.

(vii) There will be a governing body assisted by an executive committee to carry out the functions of the association. The Governing Body shall consist of not more than 8 members including the Chairman. Its function will be to supervise the activities of the Executive Committee, subject to the overriding powers of the Provincial Government. The Executive Committee of not more than 25 working through the Chairman or if necessary through sub-committees will look after the financial side and the day-to-day work of the Association, e.g., to purchase goods, to arrange for their despatch from the producing centres, to keep complete statistics of the purchases and the arrivals in Calcutta and to take instructions from the Governing Body acting with the Director-General for their disposal.

(viii) Once the cloth has been procured and has arrived in Calcutta or any destination which the Executive Committee may fix in consultation with the Director-General, the next problem will be that of distribution of the cloth for retail sale. For this purpose the Director-General may consult the Executive Committee in regard to qualities and requirements of cloth for distribution to the various consuming centres. In certain big centres from which supplies have to be made to the surrounding countryside, it may be necessary to constitute agents from amongst the body of local wholesalers or dealers, as the case may be, to do the actual distribution of the quantities received in those centres, through the retailers of those centres. The selection of the retailers will rest with such officers of the Government as the latter may choose assisted by a small advisory committee of influential local people. The selection will be subject to the overriding powers of the Director-General.

(ix) This Association will exist until the repeal of the Cotton Cloth and Yarn (Control) Order or until it is terminated by the Bengal Government.

(x) The Government of Bengal should take early steps to strengthen and expand their cotton cloth control organization.

Syndicate Scheme Criticized

At a conference with Sir Akbar Hydari, Mr. M. K. Vellodi, Mr. K. Thackersey and Mr. Kasturbhai Lalbhai in the presence of Mr. W. S. C. Tulley, Dr. Nalinaksha Sanyal, M.L.A., Moulana Nadvi and Mr. B. Agarwalla on behalf of the Retail Cloth Dealers' Association, invited pointed attention to numerous anomalies and malpractices in manufacture and price-marking of cloth by mills and demanded rationalized production of limited varieties of plain *dhotis* and *saris* in larger proportions to meet the present cloth scarcity and strongly pleaded against the proposal for entrusting the procurement of supplies for Bengal to a syndicate. Dr. Sanyal urged that all procurement, storage, assortment, movement and handling should be directly made by Government officers acting under the guidance of a representative non-official advisory body commanding public confidence.

Actual distribution of all available stock was proposed to be entrusted to zonal syndicates of all established retailers of 1940 to 1942 functioning under the guidance of local Civil Supplies Advisory Committees. The main difficulties now experienced by retailers and consumers were detailed, including the selection of new dealers to the exclusion of old and established firms, supply of damaged and unsaleable goods, breaking up of established trading centres and harassment by the Bengal Textile Directorate.

Among the main drawbacks of the proposed full rationing scheme in Greater Calcutta attention was invited to the following :—(1) Compulsory linking and arbitrary assignment of cloth ration holders to particular shops not of their choice is open to serious objection and is bound to cause great inconvenience to the consumers, (2) the stoppage of all sales during about three weeks before the 'R' day, specially during the *Id-Puja* season, will cause great hardship, (3) absence of special provisions for marriages, religious ceremonies and for students and others residing in boarding houses and hotels will cause resentment and disappointment, (4) Girls above 10 years should be given full ration, (5) high-priced superfine goods should be kept out of rationing; and (6) goods supplied to shops should be of uniform varieties and prices of parallel qualities, as far as possible.

Sir Akbar Hydari promised examination of the points raised but believed that many of them could better be tackled by the Provincial Government and informed the Association that their present visit was mainly in connection with the setting up of a proper machinery for procurement of supplies for Bengal.

Over 13 Lakhs of Cloth Ration Units Through Employers

The Bengal Civil Supplies Department states that about a month ago it was announced that to relieve the Ward Committees of a considerable part of their burden and also to expedite distribution of cloth to labour, Government would distribute cloth through employers during the period of the interim scheme.

It was proposed initially to give Cloth Ration "A" (the first unit) only to labourers and their families, including children below twelve ; later it was decided to allow the benefit of this scheme to the other employees and their families too.

The employers were asked to submit their indents for the cloth required by them and, on receipt of the indents, the following quantity of cloth in the varieties indicated has been supplied to them for distribution :—

Variety	Number of ration units in civil cloth	Number of ration units in standard cloth	Total number of cloth ration units
Dhoti, large	1,93,743	4,23,542	6,17,285
,, small	23,137	62,842	85,979
Sari, large	1,32,916	1,78,480	3,11,396
,, small	47,188	2,670	49,853
Shirting, coloured ..	34,175	..	34,175
Drill, grey, bleached ..	12,662	..	12,662
Longcloth	1,31,690	..	1,31,690
Shirting, grey	57,102	2,090	59,192
Twill	..	5,048	5,048
Total ..	..	..	13,07,285
Extra supplies ..	..	..	3,600
Grand Total .	..	..	13,10,885

Percentage of *dhotis* and *saris*—

In civil cloth .. .. 63 per cent.

In standard cloth .. .. 97.5 per cent.

Distribution of cloth through employers thus covers about one-third of Calcutta.

Meanwhile, the Ward Committees have distributed cloth to over 8 lakhs of people up to 22nd July, 1945. It is hoped that in the interval between now and the introduction of full rationing, the Ward Committees in Calcutta proper will launch a special "last lap" drive to distribute to the full the quota allotted to them every week so that as many people as possible may have their interim ration before the scheme closes down.

Bengal's Cloth Problem

Bengal's cloth supply and distribution problem was discussed at a conference between His Excellency Mr. R. G. Casey and Sir Akbar Hydari, Industries and Civil Supplies Secretary, Mr. M. K. Vellodi, Textile Commissioner, Government of India, and Mr. K. Thackersey, Chairman of the Textile Control Board, at Government House, Calcutta. Several officials of the Civil Supplies Department, Bengal Government, were present.

The discussion, it is understood, mainly centred round the question of increasing Bengal's quota and cloth rationing in the Calcutta area.

Earlier, discussions on the subject were held between Government of India officials and officers of the Civil Supplies Department, Bengal.

Sir Akbar and his colleagues met representatives of the Indian Chamber of Commerce and discussed the question of distribution of cloth in the province.

Allocation of Yarn for Handlooms

A Press Note issued by the Civil Supplies Department, Bengal, says :—

"References have been made in the Press about the discrepancy between the figures for handlooms in Bengal as given in the report of the Fact Finding Committee and in a recent advertisement published by the Civil Supplies Department of the Bengal Government.

"The Fact Finding Committee gave 1,42,461 as the number of handlooms in Bengal and estimated the product of handloom cloth at 154 million yards in the year.

"In making the allotment of cloth and yarn to Bengal, the Central Government have accepted 154 million yards of cloth as Bengal's handloom production and have accordingly calculated 7,100 bales of yarn to be a sufficient allotment.

"Each bale is reckoned to contain 400 lbs. and 1 lb. of yarn has been allowed for 4½ yards to 5 yards of handloom cloth. At one time, the Government of Bengal also based their distribution of yarn in the mofussil on the number of handlooms as given by the Fact Finding Committee.

"The constant pleas, however, from various centres all over Bengal made it fairly certain that the Fact Finding Committee's figure could not be accurate.

"To arrive at a more reliable figure, all local officers were asked in January, to report on the number of active handlooms in their sub-divisions.

"The figure which has now been taken to be the basis for allotment of yarn in the mofussil has been arrived at on the basis of the returns from each sub-division and will lead presumably to a more equitable distribution of yarn.

"To eliminate uncertainty as to the number of active looms in the various sub-divisions of Bengal, it has been decided to license them, and powers have been taken accordingly under the Bengal Cotton Cloth and Yarn (Control) Order, 1945.

"The licensing will be completed shortly. Precise information will then be available as to active looms when, if necessary, the allocation of yarn to sub-divisions may again be revised."

In the Civil Supplies advertisement referred to, no endeavour was made to claim that any increase in yardage will be produced. The Central Government have taken 154 million yards as Bengal's handloom production; the quota of 7,100 bales of yarn cannot produce more.

Only, a more equitable distribution has been aimed at in allotting yarn to all the looms reported to be active, leaving aside the Fact Finding Committee's estimated total number.

Bengal's quota of handloom yarn stands as yet at 7,100 bales, though we are assured that henceforth the whole quantity will be in counts of 20s and more, so that the estimated handloom cloth may be produced.

For other users of yarn such as the non-spinning mills, fishermen, miscellaneous fabricators and belting manufacturers, there has been a very big increase in quota.

Factory Holidays

A Calcutta Gazette Extraordinary notifies the Draft Factories (Holidays) Rules which the Governor proposes to make. Under them the compensatory holidays to be allowed shall be so spaced that not more than two holidays are given in one week. The employer shall provide each worker with a book called "Holiday Book" which shall be the property of the worker. The Rules propose to provide the workers with other facilities regarding holidays.

Use of Jute Bags

Because of the existing short supply of textile bags in the U.S.A., Conservation Order M-221 has been further amended by the U.S. War Production Board to prohibit any person from converting commercially any new or used jute burlap or cotton textile bag into an article for any other use while it has a commercial use as a bag, with or without mending, states the Indian Central Jute Committee *Bulletin* for July.

However, the order contains no prohibition against changing the size of bags. Previously a restriction in the order against converting bags into other articles referred only to burlap or jute bags.

New inventory restrictions for bag makers state that they must observe the cotton textile inventory restrictions of Order M-317, and must not have at any time more of the permitted textiles than will, in the case of each manufacturer, meet his reasonable requirements for the next 60 days.

The use of new burlap bags is now prohibited for packing fertilizer. However, stocks of burlap bags on hand or in process of manufacture on 1st June may be used for the purpose.

Calcutta Jute Mills Closed for Coal Shortage

A large number of jute mills in the Calcutta industrial area have been forced to close down in early August and are likely to remain so for some time owing to a serious deterioration in the supply of coal.

Announcing this, the Indian Jute Mills Association says that a total of nine double-shift mills and 12 single-shift mills representing 4 per cent. of loomage of the industry in this area are affected.

It is estimated that approximately 105,000 jute mills workers will be unemployed as a result.

Full Cloth Rationing in Calcutta Area from 1st October

The general outlines of the Calcutta cloth rationing scheme were announced in a Press conference a short time ago, but it was explained at that time that the date of commencement of the rationing could not be announced in view of the uncertainty as to the length of time which would be required to complete the various preliminary mechanical processes.

It will be realized that a rationing scheme concerned with roughly four million people, depends for its successful working upon an elaborate system of forms, registers and coupons. In order to prevent fraud, many of the most important of these documents have to be printed under very special supervision. The work cannot, therefore, be distributed amongst a large number of printers.

Moreover, the press to which this kind of work is normally entrusted is already engaged on work connected with the preparation of the electoral rolls. The process of preparing the necessary forms will, therefore, be more lengthy than Government had originally proposed.

(*a*) *Date of starting*. While, therefore, the stock position would have justified an earlier start, it is now clear that the mechanical processes necessary, cannot be completed before the end of September. Government have decided, therefore, to introduce full cloth rationing in the Calcutta extended rationing area with effect from 1st October 1945.

The issue of cloth ration folders containing cloth coupons will commence from 3rd September 1945, and will be made through the food ration shops. From that date, issue to all holders of food ration cards ending in the numbers 1, 2 and 3, will commence and the process is expected to last three weeks.

(*b*) *A short interval*. It is clear that there must be an interval between the termination of the interim distribution and the commencement of full rationing from the selected shops. In that interval, verification of stocks and connected operations have to be undertaken; and the new stock has to be delivered to the shopkeeper who in his turn has to sort and arrange it.

In order to minimize inconvenience to the public, every effort has been made to reduce this interval as far as possible. Interim distribution will, therefore, continue up to and including 9th, September. From 10th September onwards, no further sales of non-standard cloth on permits issued under the interim distribution scheme will be allowed.

(*c*) *Supply for Pujah and Id*. In making their plans for the introduction of full rationing, Government have had particularly in mind the needs of Moslems in connection with the *Id* in the early part of September, and of Hindus in connection with the *Pujas* early in October.

Instructions are, therefore, being issued to the Ward Committees to undertake a greatly accelerated distribution of cloth permits between now and 9th September, subject always, of course, to the qualification that distribution has to be confined to those who have not so far received cloth under the interim distribution scheme.

In order to make this accelerated distribution possible, the Textile Directorate has agreed to make available an additional thousand bales of *dhotis* and *saris*; when it is borne in mind that a thousand bales means 300,000 units, it will be realized that this is a substantial additional allotment.

In addition to this the Textile Directorate have also decided that those standard cloth shops which have not been selected for the permanent cloth rationing scheme may continue to distribute standard cloth up to and including 30th September 1945, and to these shops Ward Committees may continue issuing permits up to 27th September, 1945.

(*d*) *Miscellaneous stocks*. Apart from the stocks of *dhotis* and *saris* in the non-standard cloth shops which, as explained above, are being augmented by the Textile Directorate, there are also at present considerable stocks of other varieties of cloth in those shops.

If Government is to achieve its aim to complete distribution of one unit to the entire population of Calcutta before the introduction of full rationing, it is essential that the fullest advantage should be taken of the existence of these miscellaneous stocks—longcloth and shirtings are particularly important items amongst them.

It will be realized that the assumption of responsibility for the mechanics of cloth rationing by the Rationing Branch imposes a considerable extra burden on that branch. It is well known that in large families food ration cards have not always been taken out in the past by all members of the family.

With the approach of cloth rationing, however, the possession of a food ration card has become of vital importance to every individual, and during the past few weeks the food rationing authorities have had to cope with applications from about 30,000 persons per week for food ration cards as against the normal figure of 6,000.

(*e*) *A Restriction*. It is obvious that unless special precautions were taken, it would be possible for persons from outside to visit Calcutta and obtain food ration cards on the pretext that they proposed to take up permanent residence in the city. This might well be a profitable business and in order to avoid this danger, it has been decided that no person who obtains or has obtained his food ration card after 3rd September, will be eligible for receipt of a cloth ration folder until he has resided eight weeks in the Calcutta extended rationing area.

This additional work, involving a considerable number of inquiries as well as much clerical labour, has to be undertaken at a time when the same staff also has to cope with the work preliminary to the introduction of cloth rationing. It is of importance, therefore, that the rationing authorities should not be subjected to unnecessary inquiries about matters adequately covered by official announcements in the Press and elsewhere.

Every attempt will be made to make available the fullest possible information as to all aspects of cloth rationing, and publicity will be undertaken to make it easy for the individual to know what he has to do in order to secure his cloth ration.

If there are points of a general nature regarding which clarification is required, members of the public are requested to address the Director of Public Relations (Mr. J. K. Biswas, 32, Dalhousie Square) in the Public Relations Directorate of the Civil Supplies Department, Calcutta.

Reducing Dearness Allowance

The Government of India are considering the question of downward adjustment of dearness allowance to industrial employees and have written to Provincial Governments for their views.

The Government think that with the end of the war, prices are likely to fall gradually and problems connected with reduction of dearness allowance will assume great importance from the point of industrial peace.

According to the Central Government, the allowance in some cases in private industry has fallen short of desirable levels, while in others it has been in excess. In a period of falling prices, Government consider dearness allowance granted to their employees as being the standard minimum below which the allowance to industrial employees should not be allowed to drop, at any rate, in those cases in which it has been higher than that of the Government. It is also suggested that no downward adjustment of the allowance should be made more than once a quarter. In areas where certain concessions in kind have been granted as an integral part of the allowance, the concessional supplies of foodgrains should, provided food rationing is in force in such areas, be cut down before cash allowance is reduced.

Comments on Cloth Rationing Scheme

Apropos of the forthcoming full-fledged cloth rationing scheme in greater Calcutta, Mr. G. C. Pal, Convener of the Approved Textile Dealers' Association of Calcutta, has, in the course of a communication addressed to the Bengal Textile authorities, drawn particular attention of the Government to the various defects and practical working difficulties under the existing interim cloth rationing scheme. All these defects and working difficulties, it has been suggested, are standing in the way of smooth working of the scheme. If these are removed from the ensuing full ration scheme, the Association hopes that the public who are undergoing all sorts of troubles and botheration at present will be much relieved and the ration shops which have been doing their best to co-operate with the consuming public in all possible manner will also be spared much of the uninformed and unnecessary criticisms.

The Association has also suggested to the Government that arrangements for removal of unsold, unpopular and unsaleable goods from the ration shops should be made before the coming into operation of the new scheme and that the selection of shops should be made according to their standing, reputation and financial solvency, among other things. Allocation of such qualities and varieties as are in demand in a particular locality should be made and the proposal for keeping security deposit by a ration shop from Rs. 5,000 to Rs. 10,000 should be dropped as the Government already enjoys ample powers under the law to check the affairs of the dealers. Increase of quota during the *Puja* and *Id* festivals, need for better relationship between authorized dealers and ration shop dealers were also discussed in the letter in detail.

The approved Textile Dealers Association was formed in Calcutta towards the end of last month with representatives from ration cloth shops in each ward in order to co-operate with the consuming public and the Government in making the forthcoming full cloth rationing a complete success.

South India

THERE is intense relief all over the country that the bloodiest war the world has ever known is over. The consumers are looking forward to a downward trend in the spiral of prices. Millowners, who have so well catered to the war orders, are coldly assessing the future prospects of their mills in relation to the civilian markets and the potentialities of the external markets let loose by a militarily conquered and industrially smashed Japan. All these reflections are induced by the fact that Government will ultimately withdraw their control over the industry in all its present forms. The inescapable truth is that controls came in for the efficient execution of war supply orders. The purpose was noble and patriotic and the millowners responded to the call with alacrity and, of course, with benefit. The 70 mills in the south of India, with their counterparts in other parts of the country, despite the stoppage of war orders, can face the future with confidence. There will be no dearth of orders. The pent-up demand of years and the normal home intake, the supply to the war-devastated areas and the vast reconquered territories are bound to keep our mills pretty busy for many years to come. Indian millowners will have to largely tackle the vacuum created by the disappearance of Japan as a textile power. America looms large, in the East as a potential purveyor of fine goods. But Americans are essentially caterers to a rich home market. Their economy is built on the basis of a home market. It is yet too early to say anything about American intentions in the export sphere. If anything happens we may see closer competition between America and Lancashire for a place in the Middle and the Far East and to a certain degree in India. But England's man-power shortage is also Lancashire's Achilles heel. This serious aspect, which has assumed a national crisis, will test Lancashire to the limit in its efforts to regain the markets lost during the war years.

New Silk Association Formed in Mysore

A general meeting of silk producers and merchants representing the silk industry in Mysore, convened by Mr. V. Sundaramurthy, was held at Bangalore on 26th August.

Mr. Sundaramurthy in his speech said that for the duration of war the Cocoon Control Order was in force in Mysore, but there was no full-fledged silk price control. With the close of war the Mysore Government had cancelled the Cocoon Control Order, but the Government of India had now introduced silk control and the Government of Mysore had followed suit. The control should have been introduced while the war was on, as the silk available for civilian consumption was limited. He found no justification for the introduction of the control at the present time when the war demand for silk is over and the entire production is available for civilian consumption. He pointed out the danger from foreign competition and said that in the present stage of the industry foreign competition would ruin the industry which provides a means of supplementary income to such of the agriculturists who were depending on the silk industry. He suggested adequate protective tariffs on foreign silk so that the indigenous industry may be protected.

It was unanimously resolved, that an association under the name "The Mysore United Silk Industries and Trades Association" should be formed and that steps be taken to register the Association. The following are the office-bearers of the Association:—

Vice-Patron: Rajasevasakta P. Subbarama Chetty; *President:* Mr. V. Sundaramurthy;

Vice-President: Mr. T. L. Gangoji Rao; *Honorary Joint Secretaries:* Mr. S. Nanjundiah and Mr. M. N. Raman; *Honorary Treasurer:* Mr. R. Venkataramiah. *Members of Committee:* Messrs. K. M. Chinai, K. Adiramiah Setty, C. Chickavenkatappa, K. A. Rajagopalachari, B. M. Santhuramsa, G. K. Gupta, A. V. Rathnam Setty, R. Subba Rao, K. Srinivasalu, N. P. Gurappa and Gowrisankara Gupta.

The Chairman then made the announcement of a donation by Mr. V. Sundaramurthy, of Rs. 2,001 to the United Mysore Silk Industries and Trades Association. Fourteen others also announced donations amounting to Rs. 6,265.

Award in S. K. Mills Labour Dispute

The Arbitration Tribunal consisting of *Rajadharmaprasakta* T. Singaravelu Mudaliar (Chairman), Rao Bahadur M. Ramaswamy and Mr. K. C. Subbanna (members) pronounced judgment in the Sri Krishnarajendra Mills labour dispute. The court held the dismissal by the General Manager of the mills of the two jobbers, Ramachandra Murthy and Venkata Rao, in 1943, was justified.

On account of certain incidents that occurred in March 1943, these two workers had been dismissed but the Labour Association alleged that the workers were dismissed on account of their activity in the Association.

The court observed: "There is no doubt whatever in our opinion that the conduct of these two jobbers on the 3rd amounted to misconduct, that their pretences on the 7th and 8th of March as if they wanted leave for legitimate causes showed that their intention was not to return to work and their refusal to offer any explanation on 12th April in spite of the opportunity given to them by the General Manager justify the action taken by the General Manager.

Export of Handloom Cloth

The Hon'ble Sir Azizul Haque, Commerce Member, Government of India, visited the Muslim Chamber of Commerce at Madras on 18th August.

After welcoming the Commerce Member, Mr. Hameed Khan, President of the Chamber, presented a memorandum in which it was stated that if licences were denied to exporters of handloom piecegoods to Ceylon, who had been treated as *bona fide* shippers on the basis of exports during 1942-43, it would result in tremendous loss and suffering to the shippers. It also pointed out that the ban on the export of handloom cloth of finer counts would result in making handloom cloth unpopular in the export market.

Regarding the ban on the export of handloom cloth of finer counts, he said that the Government had to be fair to everyone. There was an extreme shortage of cloth throughout India and when available cloth made of finer counts of yarn was not sufficient for distribution in India, they could not expect the export of such cloth to be allowed freely. As for the export of handloom cloth of finer counts to Bengal from the south, the provincial authorities, he said, would consider the matter sympathetically in the case of regular exporters.

In the interest of the handloom industry of the Madras Province, it has been decided, with the approval of the Government of India, to enforce a scheme for the control of the prices and types of cotton handloom cloth exported to Ceylon, and the Provincial Government have promulgated the Madras Handloom Cloth (Exports) Control Order, 1945, to enable the Provincial Textile Commissioner to give effect to the scheme. The scheme will be applied first to the export of handloom goods against the quotas for the half-year July 1945 to December 1945. The Provincial Textile Commissioner in consultation with an Advisory Committee will notify the varieties of handloom cloth that may be exported to Ceylon and the maximum producers' and exporters' prices in respect of these varieties. The Commissioner will review the maximum prices notified by him at intervals of three months, but he may review them earlier for any exceptional reasons warranting such action. Any revision made will be duly notified in advance before it comes into force.

Handloom Industry in Madras

That the handloom cloth industry, which, even during normal times, met one-third of the demand for cloth in the Presidency, would have a bright future in the post-war period was the view expressed by Mr. Joseph Reddi, Special Deputy Registrar for Handloom Societies, Madras, in a Press interview. He disclosed that the co-operative handloom societies in the Presidency, which with 30,000 looms were at present producing Rs. 26 lakhs worth of cloth monthly, were assured of enough supply of yarn of any count at prices even less than the controlled rates. Asked why an equal number of weavers, or even more, had remained outside the societies, struggling to secure yarn, etc., Mr. Reddi said that the main reason was that a large number of them were indebted to the master-weavers, whom, therefore, they had to serve. Another reason was that it was not feasible or economical to organize a society unless at least 50 looms were working at a place, and as there were less number of looms, societies could not be organized in some areas.

The Department had proposed to increase the number of societies in the presidency to 500 to step up annual production of cloth to the value of Rs. 6 crores.

Mr. Reddi stressed that the handloom cloth industry was next in importance only to agriculture and that it deserved every help from the Government even in the post-war period. He stated that a handloom factory on the model of the Cannanore factory had just been established in Kurnool with a view to training the weavers in the production of coating, sheets, etc.

Requisition of Choolai Mills

The application filed by Messrs. Indra Singh and Sons of Bombay for the issue of a writ of *mandamus* against the Madras Government, restraining them from enforcing the order of requisition served on the Madras United Spinning and Weaving Mills (Choolai Mills), of which they were the proprietors, was not pressed by the petitioners when it came up in the High Court. On behalf of the Government, it was submitted that they had withdrawn the requisition order. On this, the applicants did not press their application and an order was passed recording the order of the Government.

Labour Commissioner for Cochin

A full-time Labour Commissioner to look after the welfare of the labourers in the Cochin State has been appointed by the Government of Cochin. Mr. M. A. Vareed, B.A., Personal Assistant to the Dewan Peishkar, has been appointed to the new post.

Sericulture Adviser, Travancore

The appointment of Mr. V. Sundaramurthy of Mysore as Sericulture Adviser to the Travancore Government has led to the belief in textile circles that the State Government is on the threshold of fresh ventures in the sericultural field. The sericulture industry with its centre in Mysore is now slowly expanding to the Coimbatore District and Travancore and even to Ceylon.

Sri Krishnarajendra Technological Institute

The Mysore Government have nominated Mr. S. L. Mannaji Rao and Mr. B. N. Vijayadeva as members to the Board of Management of the Sri Krishnarajendra Silver Jubilee Technological Institute, Bangalore, in place of Dr. M. Royan (appointed Minister to Mysore Government) and the late Mr. B. Puttaiah.

Degree Course in Textile Technology

The University of Madras has instituted a B.Sc. (Technology) degree course in textile technology, and the Government have permitted the university to utilize the facilities afforded at the Government Textile Institute, Madras.

Mr. D. M. Amalsad, Principal of the Textile Institute has been appointed honorary Professor and will be in charge of the training for the new degree. Six graduates have been selected for admission.

Cocoon Control Order Cancelled in Mysore

The Cocoon Control Order promulgated under the Defence of India Rules in the Mysore State in 1943, together with all amendments to the order issued from time to time, has been cancelled by an order of the Government. The Order had empowered the Government to fix cocoon prices with a view to stabilizing them and to ensuring regular supplies to filatures and *charka* reelers of silk in the State to facilitate war work.

Hyderabad Handloom Weaving Industry

A five-year scheme for the development of the handloom weaving industry, has been drawn up by the Hyderabad Post-war Planning Department envisaging the establishment of twelve main centres and twenty-four sub-centres from where it is proposed to supply yarn and improved appliances, advise weavers, give them practical demonstration in improved methods in dyeing and printing and train up weavers' boys. The scheme is estimated to cost about Rs. 12 lakhs.

Acreage under Cotton in Madras, 1944-45

A statistical report issued by the Department of Civil Supplies, Madras, on the acreage under cotton in the Province, during 1944-45, reveals that the average area under cotton in the province during the five years ending 1942-43 represents 10.1 per cent. of the total area under cotton in India. The area under cotton in the province in 1944-45 is estimated at 1,636,500 acres as against 2,124,000 acres for the corresponding period of last year. The present estimate for the province represents a decrease of 26 per cent. as compared with the finally recorded area of 2,210,302 acres in 1943-44. The decrease occurs in all the important cotton-growing districts. The yield per acre is expected to be normal in East Godavari, North Arcot, Tanjore, Madura, Ramnad, Malabar and South Kanara and below normal in the other districts. The seasonal factor for the province as a whole, the report continues, works out to 94 per cent. of the average for both irrigated and non-irrigated cotton, the corresponding figure in the seasonal crop report of the previous year being 91. On this basis the yield works out to 383,500 bales of 400 lbs. lint as against 485,000 bales estimated for the previous year, which represents a decrease of 20.9 per cent. It is, however, too early to estimate the yield with accuracy as much will depend on future weather conditions and their effect on the second crop and on the amount of damage done by insect pests.

Prices of Silk Cloth

Mr. S. Venkateswaran, Textile Commissioner, Madras, met the members of the local Piecegoods Merchants' Association, on 30th August. A memorandum detailing the difficulties experienced by the sellers and buyers of silk goods, was presented to the Commissioner by Mr. B. A. Padmanabha Aiyar.

Replying, the Textile Commissioner stated that he would fix prices of silk cloth and send the list to the merchants. The merchants would get all silk cloth only through the Textile Commissioner in future and there would be no wholesale dealers for silk cloth. Hawkers of ready-made goods, he said, could not get their supplies direct from the dealers without permits. In view of the difficulties experienced by cloth dealers generally, the Commissioner observed that a liberal policy would be followed. It was stated by the Commissioner that he was arranging to import about 3,000 bales for the ensuing *Deepavali*.

Silk for Madras

The prospect of more silk for the Madras market at fairly attractive prices are now more real. The Madras Government are stated to have decided to release stocks of Mysore silk to weavers and loom owners. Prices of silk fabrics as a result are likely to come down by 30 per cent.

NEWS OF THE MONTH

Indian

Textile Mill Holidays.—In August, the Government of Bombay issued an order fixing the holidays for the cotton textile mills in Bombay City and the Bombay Suburban District during the period, September to December. Owing to trouble at the generating stations of the Tata Hydro-Electric Power Supply Company, it has now been found necessary to make changes in these holidays fixed for September and October, and an amending order fixes revised holidays during these months.

Bonus for Workers of Ahmedabad: Industrial Court's Award.—Textile workers in Ahmedabad earning less than Rs. 200 per month will get a bonus equivalent to one-fifth of their total earnings in 1944 irrespective of whether they are at present employed in those mills or not. Those who have worked for less than 75 working days but more than 32 working days will, however, be granted a bonus to the extent of one-tenth of their earnings, while those who have worked for less than 33 working days will not be entitled to any bonus.

An award to this effect was given by the Industrial Court in the industrial dispute between the Textile Labour Association, Ahmedabad, and the Ahmedabad Millowners' Association. The Court was composed of the Hon. Mr. Justice H. V. Divatia, President, and the Hon. Mr. Justice H. V. Rajadhyaksha and Mr. D. V. Vyas, members.

The court decreed that the earnings, for the purpose of calculating the bonus, would mean wages or salaries exclusive of the dearness allowance, bonus or other emoluments paid to an employee in 1944. In the case of women employees on maternity leave, the actual maternity allowance paid to them would be treated as part of the wages for computing the amount of bonus.

The court directed that bonus should be paid in two equal instalments, the first instalment to be paid in the second week of October and the second one, in the second week of November. The quantum of bonus to be paid to contract labour and to employees getting more than Rs. 200 per month was left to the discretion of the individual mills.

Textile Calendar

AUGUST

30th, Thursday :
First Quarterly Meeting of the Association of Indian Industries, Bombay.

SEPTEMBER

6th, Thursday :
Bombay Conference of the Representatives of Provincial Governments convened by the Textile Commissioner to the Government of India to revise provincial cotton piecegoods quotas.

7th, Friday :
Bombay European Textile Association Whist Drive and Dance, The Taj, Bombay.

16th, Sunday :
All-India Manufacturers' Organization, Bombay, Second Quarterly General Meeting.

17th, Monday :
Silk and Art Silk Mills' Association, Bombay, Film Show of "Romance of Rayon" at Electric House, Fort, Bombay.

20th, Thursday :
Textile Association (India) Monthly Social Meeting, Mr. R. D. Char speaking on his impressions of his visit to Industrial concerns in the United States of America, Podar College of Commerce, Matunga, Bombay.

25th, Tuesday :
Post-war Planning Committee (Textiles), Government of India, meets in Bombay.

29th, Saturday :
Textile Processors' Association (India) First Annual Meeting, The Taj, Bombay.

OCTOBER

5th, Friday :
Textile Association (India). Public lecture by Dr. Nazir Ahmad, O.B.E., Director, I.C.C.C. Technological Laboratory, on "Some Aspects of Cotton Research in the United States of America" at Blavatsky Lodge, French Bridge, Bombay.

The award stated that the employees who were entitled to receive the bonus but might not have received it, might apply to the manager of the mill concerned before 30th November but the management would not be bound to entertain any application received after that date.

Victory Bonus for Mill Workers: Total of Rs. 62,00,000.—The cotton mill workers in Bombay will get a victory bonus equivalent to one-twelfth of their respective total earnings, exclusive of the dearness allowance, during the year ended 31st August 1945. The payment on this account will be approximately Rs. 62,00,000.

This decision was arrived at at the urgent general meeting of the Millowners' Association, Bombay, on Thursday, 13th September 1945. The resolution passed at the meeting stated that the bonus should be paid to all workers whose names stood on the muster rolls of the member mills on 31st August and who would continue to be in service until 15th October, the date of making the payment. It was also agreed that the basis of payment should be the usual conditions.

Working Class Cost of Living.—During July the working class cost of living index number for Bombay, with the average prices for the year ended June 1934 equal to 100, was 240. This was five points higher than in the preceding month. The index number for food articles advanced by 10 points to 281.

Fires In Bombay Mills.—Property estimated at Rs. 50,000 is stated to have been destroyed, following a fire which broke out in one of the departments of Edward Sassoon Mills at Ferguson Road, Bombay, in the early hours of Tuesday the 25th instant. The cause of the fire is not known.

When the fire started, the workers of the night shift had already left the premises. The fire brigade was immediately summoned. With great difficulty, the fire was prevented from spreading to other departments, Nearly three hours elapsed before it was completely put out.

The cotton milling section of the Finlay Mills, Ltd., at Government Gate Road, Lalbaug, Bombay, caught fire on Wednesday, the 26th September 1945. The fire was extinguished within an hour.

While the actual extent of damage has not been ascertained, the loss is believed to be considerable and is regarded to be Rs. 10,000. The fire brigade was assisted by the workmen of the mill and the Salvage Corps in putting out the fire, the origin of which is not known.

Mill Consumption in June.—Consumption of Indian cotton by mills in June, 1945, was 342,446 bales as against 335,410 bales in the same month a year ago. The progressive figure for consumption during the September-June period is 3,463,825 bales," as compared with 3,429,435 bales in the corresponding period of the previous year.

New Mills in Deficit Areas.—With the cessation of hostilities, arrangements are being made for opening new mills in deficit areas, but, it is learnt, no new mills will be allowed by the Government to be opened in surplus areas, where the existing mills are placing orders for new up-to-date machinery to be able to compete successfully with new mills in deficit areas.

Olpad and Surat Cotton Areas.—The Government of Bombay have cancelled their orders segregating the Olpad cotton area from the rest of the cotton areas in the Surat and Broach Districts, and have approved of the 'amalgamation of the Olpad and Surat cotton areas, says a Press Note.

30 Per Cent. Drop in Cotton Acreage: All-India Forecast.—A sharp decline of 30 per cent. in acreage and 33 per cent. in the production of Indian cotton during 1944-45, as compared with the preceding year, has been foreshadowed by the Department of Commercial Intelligence and Statistics. The official final forecast places the acreage at 14,803,000 acres, and the output at 3,543,000 bales of 400 lbs. each.

This forecast refers to the entire cotton area of India, and deals with both the early and late varieties of the season. The table below shows the present estimates of area and yield classified according to the recognized trade descriptions of cotton:—Bengals 1,252,000; Oomras 3,499,000; 555,000; Broach 471,000; 112,000; Surti 373,000 ; 60,000 ; Dholleras 808,000;

134,000; Others 4,801,000; 868,000. Total 14,803,000; 3,543,000.

Handloom Industry in Hyderabad: Five-Year Scheme.—A five-year plan for the development of the handloom industry in the State, forming part of the post-war planning, envisages the establishment of 12 main centres and 24 sub-centres from which it is proposed to supply yarn and improved appliances and to advise weavers and give them practical demonstrations in improved methods of dyeing and printing. Weaver boys will also be trained at these centres. The scheme is estimated to cost about Rs. 12,00,000 and is calculated to remove many of the handicaps under which handloom weavers are at present labouring and rescue the weaver from the middleman's clutches.

Mather and Platt Ltd., Bombay.—Mr. Heaton Mather, Manager of the Bombay Office of Messrs. Mather and Platt Ltd., is at present in England and expects to return to India towards the end of the year. During his absence business in connection with the firm's bleaching, printing, dyeing and finishing products is being attended to by Mr. A. L. Slack at their Bombay Office at "Hamilton House," 8, Graham Road, Ballard Estate.

War Risks Insurance.—Termination of the War Risks Insurance (Factories) Scheme on 1st September is announced by the Government of India in a telegram to Mr. J. W. T. Leith, Secretary, Government of India War Risks Insurance Advisory Committee, Bombay. The announcement adds that Government agents should issue no policies effective on or after that date. Government also announce that their scheme under the War Risks Insurance (Goods) Ordinance will terminate on 1st October.

Excess Profits Tax Refund.—Sir John Sheehy, Member of the Central Board of Revenue, told the Committee of the Bengal National Chamber of Commerce recently that the portion of the excess profits tax refundable under the Act would be refunded within three years with interest on it, and deposits made under E.P.T. would be refunded within one year. This is revealed in a statement issued by the Secretary of the Chamber. He adds that various points were discussed, and Sir John gave a sympathetic hearing to the grievances of assessees as put forward by the Committee.

India's Chemical Industries: Delegation to England and U.S.A.—The Government of India have agreed to give facilities to the Indian Chemical Manufacturers' Association to send a delegation consisting of seven persons to the United Kingdom and the United States of America, with a view to study the latest developments in the chemical industries in those countries.

Dr. K. A. Hamied, President of the Indian Chemical Manufacturers' Association and Managing Director of the well-known Chemical Industrial and Pharmaceutical Laboratories, Bombay, will lead the delegation, which will consist of the following: Mr. L. Gupta of Shambu Nath and Sons, Ltd., Amritsar; Mr. S. P. Sen of the Bengal Chemical and Pharmaceutical Works Ltd., Calcutta; Dr. B. C. Das, Indian Health Institute and Laboratory, Calcutta; Mr. K. K. Raman of the Mettur Chemical and Industrial Corporation, Trichinopoly; Mr. R. B. Amin of the Alembic Chemical Works, Ltd., Baroda; Mr. Mohd. Haniff, the Bharat Laboratory and Chemical Works, Calcutta.

In case any of the above delegates are unable to proceed with the delegation due to unavoidable circumstances, the following additional delegates will take their place:—Mr. M. L. Shroff, Birla Laboratories, Calcutta and Mr. B. Maitra, Calcutta Chemical Co., Ltd., Calcutta.

Restrictions on Import Control: Removal Not Feasible.—That the total immediate relaxation of import trade control regulations is not feasible is the reply the Government of India have given to the South Indian Chamber of Commerce which urged the removal of import and export trade restrictions.

The Government of India consider that the process of decontrol necessarily will be gradual in order to adjust in the light of various important considerations. Procurement of goods is regulated in accordance with allotments made to India regarding commodities like textile chemicals and fertilizers, and in the case of capital machinery and engineering stores it will be in accordance with the industrial plan of India.

The Government of India also drew the attention of the Chamber that the problem of utilizing the limited currency resources to India's best advantage still remained and that the best results could only be secured by a system of approved imports under licences.

Tariff Board to be Formed: Protection for Industries.—An important decision regarding the tariff policy and the appointment of an Indian Tariff Board has been taken by the Government of India.

The Government of India, it is learnt, have selected the personnel of the Tariff Board and an official announcement in this connection will be made as soon as the intimation of acceptance from the members selected is received. It is further understood that Sir Shanmukham Chetty has been selected for the chairmanship of the Tariff Board with Mr. C. C. Desai, Controller-General of Civil Supplies to the Government of India, as Secretary. Pro. Anwar Iqbal Qureshi of the Osmania University and Mr. K. C. Neogy are the other two members of the Board.

The Board will investigate the scope of expansion in peace-time of industries which sprang up in war-time and determine the amount of help needed for their protection.

The Government of India, it is understood, have received replies from industries to their circular inquiring which industries are needed in the post-war period, and all applications received will be placed before the Board for examination.

Levy of Sales Tax on All-India Basis: Proposal before Central Government.—A proposal for levying the sales tax on an all-India basis to finance post-war development plans of the Provincial Governments is being considered by the Government of India. The proposal seeks to entrust the Central Government with the responsibility of administering the tax and of distributing the net proceeds among the Provincial Governments in proportion to the gross contribution made by the territories within their respective jurisdictions.

The Central Government have, it is understood, sought the views of the Provincial Governments on the proposal. If the suggestion is accepted, the Government of India will approach the Secretary of State for India with a request for section 137 of the Government of India Act to be amended to transfer the relevant entry from the Provincial Legislative List to the Federal Legislative List. This change would be necessary in view of the fact that under the present constitution, the sales tax falls within the sphere of the provincial legislature. It is hoped that this change would be possible at an early date and a Bill empowering the Government of India to impose the general sales tax can be placed before the Central Legislature in its budget session. The tax may be levied with effect from 1st April next.

The reaction of the Provincial Government to this proposal for centralizing the administration of the sales tax is not known. It is, however, believed that, while the importance of using the sales tax as a measure of taxation in the post-war period is recognized by the Provincial Governments, some of them will, at any rate, like to administer the tax themselves in order to ensure elasticity to suit local conditions. In this connection, it may be pointed out that a sales tax is at present in force in the Punjab, Bengal, Madras and Bihar. The scale of taxation and the scope of the tax, however, varies from province to province. The sales tax in Assam is of a restricted character and covers only sales of luxury goods.

The sales tax has become a potent source of revenue for the Governments of leading countries in the world during the past 25 years. The advantage of the tax lies in its productivity and convenience from the point of view of administration, while the only argument used against it is that it is retrogressive in character.

New Provision in Trade Marks Act: Protection Against Malpractices.—A new provision in the Trade Marks Act, which lays down a penalty for false representation of a trade mark as "registered," will be enforced on 1st January 1946. The provision, it is expected, will not only protect the interests of manufacturers and buyers, but will eliminate infringements of trade marks rights as well as problems created by unscrupulous traders and hawkers, who pass off imitation goods as genuine.

With the restrictions on imports of consumer goods, especially of articles of luxury, there has been a scarcity which affected normal trade practices to a considerable degree. Taking advantage of the increasing demand for popular goods, unscrupulous dealers and hawkers have been carrying on a roaring trade in commodities of daily use by putting spurious imitations into containers of well-known brands.

In Bombay City, hawkers and pedlars have taken to the worst type of unhealthy business practices by disposing of watches by replacing the dial with that of high class foreign make as genuine. In toilet goods, old containers are refilled with locally manufactured stuff and passed off as genuine.

Adequate protection against these malpractices and infringements of trade marks could not be given, because registration of trade marks began only in June 1942, two years after the Act came into force. Also, there has been no provision in the Act for penalizing infringements of trade marks. Hitherto, such cases were dealt with under the Indian Penal Code for cheating or under a war-time measure—the Hoarding and Profiteering Prevention Ordinance. Recently, a Bombay Magistrate sentenced a merchant to pay a fine of Rs. 5,000 under the Ordinance for substituting soda ash of some indigenous variety for a popular brand.

The provision which is now incorporated in the Act will remove the lacuna in the law of trade marks. It lays down a penalty for falsely representing a trade mark as "registered," when it is not in fact duly registered under the provisions of the Act.

It is suggested that all genuine trade marks should be registered under the Trade Marks Act, for the manufacturer would not only help himself, but the general public as well.

Foreign

Storm Destroys U.S. Cotton.—Thousands of bales of unpicked cotton have been ruined by a three-day hurricane which devastated the growing crops over a wide area of Southern Texas. The loss is estimated at several million dollars. At least eight people have been killed. The storm followed a hurricane during which the wind velocity reached 135 miles per hour.

Australian Wool.—Mr. Joseph B. Chifley, the Australian Prime Minister, tabling the new wool agreement in the House of Representatives on 30th August last, said that as regards the cost of operating the joint organization, Australia's initial capital investment would be £40,000,000 and would be provided over a four-year period. The principal object of the plan was to protect growers against serious price falls and prevent undue fluctuations.

The Australian Government was assuming half ownership of Australian-grown wool owned by Britain.

Legislation would be introduced to ratify the agreement.

Wilson Brothers Bobbin Company, Limited.—It is clear from the directors' report for the year ended 15th July, 1945, that they have decided not to appropriate any amount for depreciation for the current year, as the buildings, plant and machinery have been more than adequately depreciated in past years.

After providing for all trade charges and reserve for taxation, the net profit of the business amounts to £28,373 6*s*. 9*d*., which, added to the balance brought forward from the previous year of £1,022 1*s*. 1*d*., makes a total of £29,395 7*s*. 10*d*.

The directors recommend a dividend of 8 per cent. on £285,000 (subject to income-tax), £22,800, transfer to reserve fund (making a total of £50,000), £5,000, carry-forward to the credit of next year's account £1,595 7*s*. 10*d*.

War-time Controls Under Review in Australia.—The Australian Department of Post-war Reconstruction has submitted to the Government proposals regarding the lifting of war-time controls. These indicate that sugar and tea rationing could be lifted early in the first year after the end of the war with Japan; meat and butter rationing to be discontinued at a later date than other foodstuffs; clothes rationing will end as soon as production and imports come within reasonable distances of demand; the Government should maintain a continuous review of controls over private transactions with a view to discontinuing controls no longer essential; no substantial relaxation of major controls of man-power, materials and production until Japan is defeated; man-power control not to be continued after the end of the war.

Cotton Growing in Australia.—At a public inquiry by the Australian Tariff Board into continued assistance for the cotton growing industry in that country it was stated that the reason cotton acreage had been reduced was that farmers had changed to food production which was more profitable under war conditions. They would return to cotton growing when prices for dairy produce and other food became normal. Mr. R. J. Webster, Managing Director of Bradford Cotton Mills Ltd., stated that six months ago he submitted a scheme of development to the Textile Advisory Committee of the Secondary Industries Commission in Australia, which envisaged an expenditure of £9,000,000 on land, plant and building, and the production in Australia of 100,000,000 lbs. of yarn annually and 92,000,000 square yards of cloth. This, he estimated, would be 40 per cent. of Australia's requirements in cotton piecegoods. Discussions with British firms indicated they would assist in this development provided there was sympathetic consideration from the Commonwealth Government.

Iraq's Cotton Crop is Slightly Higher.—The 1944 cotton crop in Iraq is estimated at 5,000 bales (of 478 lbs. net) compared with 3,000 bales in 1943 and a 1937-41 average of 16,200 bales. Cotton acreage was restricted by a decree of 12th March 1942, to 25 per cent. of the 225,000 acres planted the year before.

The restriction was intended to permit a greater production of food crops. High prices for food crops caused an even greater shift from cotton in 1942 and 1943 than was anticipated.

There is no cotton mill industry in Iraq, and nearly all the crop is usually exported. During the war years most of Iraq's cotton has been exported to Iran. Stocks of cotton from previous crops still held by Iraq's three ginneries at the end of November 1944 were equivalent to 2,250 bales (of 478 lbs. net).

No cotton from the 1944 crop had been ginned at that time. Prices of cotton were reported to be at a favourable level, although no quotations were noted. Cotton materials, particularly clothing items, are exceptionally scarce, and second-hand clothing is in strong demand.

Textile Firms Join " Betro ".—Each week sees fresh additions to the ranks of the recently formed British Export Trade Research Organization, in which it is evident that lively interest is being taken. The news of its formation has proved world-wide and expressions of overseas' opinion now being received by the organization reveal a great deal of satisfaction that British industry intends to analyse the precise requirements of the Empire and foreign consumer.

The words of a Norwegian importer may well be quoted: " The Germans," he told a BETRO official, " made extensive use of market research and, in fact, seemed to know more about our countrymen's requirements than we ourselves... I am glad that our British friends are adopting a scientific method of market investigation." The following textile and cordage firms are amongst those which have joined BETRO:—Courtaulds, Ltd., Halls Barton Ropery Co. and Nahum's Union Mills, all founder members. Ordinary members include:—The Boase Spinning Co., Ltd., The Fine Cotton Spinners' and Doublers' Association, Ltd., The Gourock Ropework Co., Ltd., R. Hood Haggie and Son, Ltd., and the York Street Flax Spinning Co., Ltd.

Cotton Industry Not to be Nationalized : Announcement by Sir S. Cripps.—The British cotton industry is not to be nationalized.

The President of the Board of Trade, Sir Stafford Cripps, announcing this at a Press Conference in Manchester said that a commission with an independent chairman and comprising representatives of employers and trade unions, would be set up immediately to frame definite proposals to revise agreements and to reform the staffing of machinery to the benefit of both employers and employees.

Cotton, he added, was the first major industry he had dealt with and that might give some indication as to how other industries might be dealt with. If the cotton industry in its present form was to receive the support and help of the Government, steps must be taken to improve the conditions of working and its organization, he said.

There must be an extension of the methods of joint consultation, reform of distribution arrangements, extension of double-shift working, re-equipment of mills with modern machinery and amalgamation in the spinning section.

The Government fully appreciate that if the industry were to continue in the hands of private enterprise, it must yield a reasonable return on the capital actually employed.

Fifty Years Ago

(From the *Indian Textile Journal*, September 1895)

A Wealthy Spinner

"The greatest personal fortune disposed of by will for two years has just been declared. Mr. George Henry Strutt, partner in the famous Belper Cotton Mills (Derbyshire, England) left a net personal estate of £1,621,261, by which the Treasury will realize a handsome sum in estate duty. The Belper Mills are among the oldest extant, their speciality is high class hosiery yarns and the machinery has of late years been entirely modernized. The head of the family of Strutt was sometime ago raised to the Peerage with the title of Lord Belper."

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